Table A-1. DTSC-Recommended Screening Levels for Soil

		Toxicity Factors for the DTSC-SLs								Screening Levels for Residential Soil (mg/kg)								Screening Levels for Commercial/Industrial Soil (mg/kg)							
		Oral Slope Factor		Inhalation Unit Risk		Reference Dose - Oral		Reference Concentration		Cancer Endpoint		Cancer Endpoint		Noncancer Endpoint		Noncancer Endpoint		Cancer Endpoint		Cancer Endpoint		Noncancer Endpoint		Noncancer Endpoint	
Analyte	CAS #	SFo (mg/kg-d)$^{-1}$	Source	IUR (µg/m^3)$^{-1}$	Source	RfDo (mg/kg-d)	Ref.	RfC or REL (µg/m^3)	Source	USEPA $RSL_{Combined}$	$DTSC\text{-}SL_{Combined}$	Final Value	Source	USEPA $RSL_{Combined}$	$DTSC\text{-}SL_{Combined}$	Final Value	Source	USEPA $RSL_{Combined}$	$DTSC\text{-}SL_{Combined}$	Final Value	Source	USEPA $RSL_{Combined}$	$DTSC\text{-}SL_{Combined}$	Final Value	Source
USEPA RSL Analytes																									
Acrylamide	79-06-1	4.5E+00	OEHHA	1.3E-03	OEHHA	2.0E-03	IRIS	6.0E+00	IRIS	2.4E-01	2.6E-02	2.6E-02	DTSC	1.3E+02	1.2E+02	1.3E+02	USEPA	4.6E+00	3.3E-01	3.3E-01	DTSC	1.6E+03	1.1E+03	1.6E+03	USEPA
Acrylonitrile	107-13-1	1.0E+00	OEHHA	2.9E-04	OEHHA	4.0E-02	ATSDR	2.0E+00	IRIS	2.6E-01	6.8E-02	6.8E-02	DTSC	1.6E+01	4.0E+01	1.6E+01	USEPA	1.1E+00	3.0E-01	3.0E-01	DTSC	6.8E+01	1.7E+02	6.8E+01	USEPA
Arsenic, Inorganic	7440-38-2	9.5E+00	OEHHA PHG	3.3E-03	OEHHA	3.5E-06	OEHHA	1.5E-02	OEHHA	6.8E-01	6.7E-02	6.7E-02	DTSC	3.5E+01	2.5E-01	2.5E-01	DTSC	3.0E+00	2.5E-01	2.5E-01	DTSC	4.8E+02	3.0E+00	3.0E+00	DTSC
Benzaldehyde	100-52-7	--	--	--	--	1.0E-01	IRIS	4.0E+02	Route	--	--	--	--	7.8E+03	4.3E+03	7.8E+03	USEPA	--	--	--	--	1.2E+05	3.0E+04	3.0E+04	DTSC
Benzene	71-43-2	1.0E-01	OEHHA	2.9E-05	OEHHA	4.0E-03	IRIS	3.0E+00	OEHHA	1.2E+00	3.3E-01	3.3E-01	DTSC	8.3E+01	1.1E+01	1.1E+01	DTSC	5.1E+00	1.4E+00	1.4E+00	DTSC	4.3E+02	4.7E+01	4.7E+01	DTSC
Benzenethiol	108-98-5	--	--	--	--	1.0E-03	PPRTV	4.0E+00	Route	--	--	--	--	7.8E+01	4.0E+01	7.8E+01	USEPA	--	--	--	--	1.2E+03	2.7E+02	2.7E+02	DTSC
Benzidine	92-87-5	5.0E+02	OEHHA	1.4E-01	OEHHA	3.0E-03	IRIS	--	--	5.3E-04	2.3E-04	5.3E-04	USEPA	1.9E+02	1.8E+02	1.9E+02	USEPA	1.0E-02	3.0E-03	3.0E-03	DTSC	2.5E+03	1.6E+03	2.5E+03	USEPA
Beryllium and compounds	7440-41-7	--	--	2.4E-03	IRIS	2.0E-04	OEHHA PHG	7.0E-03	OEHHA	1.6E+03	1.6E+03	1.6E+03	USEPA	1.6E+02	1.5E+01	1.5E+01	DTSC	6.9E+03	6.9E+03	6.9E+03	USEPA	2.3E+03	2.1E+02	2.1E+02	DTSC
Bromodichloromethane	75-27-4	6.2E-02	IRIS	3.7E-05	OEHHA	2.0E-02	IRIS	8.0E+01	Route	3.0E-01	2.9E-01	3.0E-01	USEPA	1.6E+03	2.8E+02	2.8E+02	DTSC	1.3E+00	1.3E+00	1.3E+00	USEPA	2.3E+04	1.3E+03	1.3E+03	DTSC
Bromoform	75-25-2	7.9E-03	IRIS	1.1E-06	IRIS	2.0E-02	IRIS	8.0E+01	Route	2.0E+01	1.8E+01	2.0E+01	USEPA	1.6E+03	5.4E+02	1.6E+03	USEPA	8.7E+01	8.0E+01	8.7E+01	USEPA	2.3E+04	3.0E+03	3.0E+03	DTSC
Butadiene, 1,3-	106-99-0	6.0E-01	OEHHA	1.7E-04	OEHHA	--	--	2.0E+00	IRIS	5.8E-02	1.4E-02	1.4E-02	DTSC	1.8E+00	1.8E+00	1.8E+00	USEPA	2.6E-01	6.2E-02	6.2E-02	DTSC	7.7E+00	7.7E+00	7.7E+00	USEPA
Butanol, N-	71-36-3	--	--	--	--	1.0E-01	IRIS	4.0E+02	Route	--	--	--	--	7.8E+03	4.8E+03	7.8E+03	USEPA	--	--	--	--	1.2E+05	3.7E+04	3.7E+04	DTSC
Butylbenzene, n-	104-51-8	--	--	--	--	5.0E-02	PPRTV	2.0E+02	Route	--	--	--	--	3.9E+03	1.2E+03	1.2E+03	DTSC	--	--	--	--	5.8E+04	6.4E+03	6.4E+03	DTSC
Butylbenzene, sec-	135-98-8	--	--	--	--	1.0E-01	Screening PPRTV	4.0E+02	Route	--	--	--	--	7.8E+03	2.2E+03	2.2E+03	DTSC	--	--	--	--	1.2E+05	1.2E+04	1.2E+04	DTSC
Butylbenzene, tert-	98-06-6	--	--	--	--	1.0E-01	Screening PPRTV	4.0E+02	Route	--	--	--	--	7.8E+03	2.2E+03	2.2E+03	DTSC	--	--	--	--	1.2E+05	1.2E+04	1.2E+04	DTSC
Cadmium (Diet)	7440-43-9 (diet)	--	--	1.8E-03	IRIS	6.3E-06	OEHHA PHG	1.0E-02	ATSDR	2.1E+03	9.1E+02	2.1E+03	USEPA	7.1E+01	5.2E+00	5.2E+00	DTSC	9.3E+03	4.0E+03	9.3E+03	USEPA	9.8E+02	7.3E+00	7.3E+00	DTSC
Carbon Tetrachloride	56-23-5	1.5E-01	OEHHA	4.2E-05	OEHHA	4.0E-03	IRIS	1.0E+02	IRIS	6.6E-01	9.9E-02	9.9E-02	DTSC	1.0E+02	5.2E+01	1.0E+02	USEPA	2.9E+00	4.3E-01	4.3E-01	DTSC	5.8E+02	2.5E+02	5.8E+02	USEPA
Chlordane	12789-03-6	1.3E+00	OEHHA	3.4E-04	OEHHA	5.0E-04	IRIS	7.0E-01	IRIS	1.7E+00	4.3E-01	4.3E-01	DTSC	3.4E+01	3.2E+01	3.4E+01	USEPA	7.5E+00	1.5E+00	1.5E+00	DTSC	4.2E+02	3.2E+02	4.2E+02	USEPA
Chloro-2-methylaniline, 4-	95-69-2	2.7E-01	OEHHA	7.7E-05	OEHHA	3.0E-03	Screening PPRTV	--	--	5.4E+00	1.9E+00	5.4E+00	USEPA	1.9E+02	1.8E+02	1.9E+02	USEPA	2.3E+01	5.5E+00	5.5E+00	DTSC	2.5E+03	1.6E+03	2.5E+03	USEPA
Chloroacetaldehyde, 2-	107-20-0	2.7E-01	Screening PPRTV	6.8E-05	Route	--	--	--	--	2.6E+00	5.4E-01	5.4E-01	DTSC	--	--	--	--	1.2E+01	2.4E+00	2.4E+00	DTSC	--	--	--	--
Chlorobutane, 1-	109-69-3	--	--	--	--	4.0E-02	PPRTV	1.6E+02	Route	--	--	--	--	3.1E+03	2.7E+02	2.7E+02	DTSC	--	--	--	--	4.7E+04	1.2E+03	1.2E+03	DTSC
Chlorotoluene, o-	95-49-8	--	--	--	--	2.0E-02	IRIS	8.0E+01	Route	--	--	--	--	1.6E+03	4.8E+02	4.8E+02	DTSC	--	--	--	--	2.3E+04	2.6E+03	2.6E+03	DTSC
Chlorotoluene, p-	106-43-4	--	--	--	--	2.0E-02	Screening PPRTV	8.0E+01	Route	--	--	--	--	1.6E+03	4.4E+02	4.4E+02	DTSC	--	--	--	--	2.3E+04	2.3E+03	2.3E+03	DTSC
Chromium(III), Insoluble Salts	16065-83-1	--	--	--	--	1.5E+00	IRIS	--	--	--	--	--	--	1.2E+05	3.6E+04	3.6E+04	DTSC	--	--	--	--	1.8E+06	1.7E+05	1.7E+05	DTSC
Crotonaldehyde, trans-	123-73-9	1.9E+00	HEAST	4.8E-04	Route	1.0E-03	PPRTV	4.0E+00	Route	3.7E-01	8.7E-02	8.7E-02	DTSC	7.8E+01	4.0E+01	7.8E+01	USEPA	1.7E+00	3.8E-01	3.8E-01	DTSC	1.2E+03	2.6E+02	2.6E+02	DTSC
Cyanides																									
~Cyanogen	460-19-5	--	--	--	--	1.0E-03	IRIS	4.0E+00	Route	--	--	--	--	7.8E+01	4.5E+00	4.5E+00	DTSC	--	--	--	--	1.2E+03	2.0E+01	2.0E+01	DTSC
~Cyanogen Bromide	506-68-3	--	--	--	--	9.0E-02	IRIS	3.6E+02	Route	--	--	--	--	7.0E+03	3.1E+02	3.1E+02	DTSC	--	--	--	--	1.1E+05	1.3E+03	1.3E+03	DTSC
~Cyanogen Chloride	506-77-4	--	--	--	--	5.0E-02	IRIS	2.0E+02	Route	--	--	--	--	3.9E+03	3.3E+02	3.3E+02	DTSC	--	--	--	--	5.8E+04	1.5E+03	1.5E+03	DTSC
~Potassium Silver Cyanide	506-61-6	--	--	--	--	5.0E-03	IRIS	--	--	--	--	--	--	3.9E+02	2.3E+02	3.9E+02	USEPA	--	--	--	--	5.8E+03	1.5E+03	1.5E+03	DTSC
~Silver Cyanide	506-64-9	--	--	--	--	1.0E-01	IRIS	--	--	--	--	--	--	7.8E+03	4.5E+03	7.8E+03	USEPA	--	--	--	--	1.2E+05	2.9E+04	2.9E+04	DTSC
Dibromobenzene, 1,3-	108-36-1	--	--	--	--	4.0E-04	screening PPRTV	1.6E+00	Route	--	--	--	--	3.1E+01	1.6E+01	3.1E+01	USEPA	--	--	--	--	4.7E+02	1.1E+02	1.1E+02	DTSC
Dibromobenzene, 1,4-	106-37-6	--	--	--	--	1.0E-02	IRIS	4.0E+01	Route	--	--	--	--	7.8E+02	4.3E+02	7.8E+02	USEPA	--	--	--	--	1.2E+04	2.9E+03	2.9E+03	DTSC
Dibromochloromethane	124-48-1	8.4E-02	IRIS	2.1E-05	Route	2.0E-02	IRIS	8.0E+01	Route	8.3E+00	9.5E-01	9.5E-01	DTSC	1.6E+03	4.7E+02	4.7E+02	DTSC	3.9E+01	4.2E+00	4.2E+00	DTSC	2.3E+04	2.5E+03	2.5E+03	DTSC
Dibromoethane, 1,2-	106-93-4	2.0E+00	IRIS	6.0E-04	IRIS	9.0E-03	IRIS	8.0E-01	OEHHA	3.7E-02	1.2E-01	3.7E-02	USEPA	7.4E+01	7.2E+00	7.2E+00	DTSC	1.6E-01	5.7E-01	1.6E-01	USEPA	3.3E+02	3.1E+01	3.1E+01	DTSC
Dichlorobenzidine, 3,3'-	91-94-1	1.2E+00	OEHHA	3.4E-04	OEHHA	--	--	--	--	1.2E+00	4.4E-01	1.2E+00	USEPA	--	--	--	--	5.1E+00	1.2E+00	1.2E+00	DTSC	--	--	--	--
Dichloroethane, 1,1-	75-34-3	5.7E-03	OEHHA	1.6E-06	OEHHA	2.0E-01	PPRTV	8.0E+02	Route	3.6E+00	3.6E+00	3.6E+00	USEPA	1.6E+04	1.6E+03	1.6E+03	DTSC	1.6E+01	1.6E+01	1.6E+01	USEPA	2.3E+05	7.2E+03	7.2E+03	DTSC
Dichloroethylene, 1,2-cis-	156-59-2	--	--	--	--	2.0E-03	IRIS	8.0E+00	Route	--	--	--	--	1.6E+02	1.9E+01	1.9E+01	DTSC	--	--	--	--	2.3E+03	8.6E+01	8.6E+01	DTSC
Dichloroethylene, 1,2-trans-	156-60-5	--	--	--	--	2.0E-02	IRIS	8.0E+01	Route	--	--	--	--	1.6E+03	1.3E+02	1.3E+02	DTSC	--	--	--	--	2.3E+04	6.0E+02	6.0E+02	DTSC
Dichloropropane, 1,3-	142-28-9	--	--	--	--	2.0E-02	PPRTV	8.0E+01	Route	--	--	--	--	1.6E+03	4.2E+02	4.2E+02	DTSC	--	--	--	--	2.3E+04	2.2E+03	2.2E+03	DTSC
Dichloropropene, 1,3-	542-75-6	9.1E-02	OEHHA	1.6E-05	OEHHA	3.0E-02	IRIS	2.0E+01	IRIS	1.9E+00	5.8E-01	5.8E-01	DTSC	7.3E+01	7.3E+01	7.3E+01	USEPA	8.3E+00	2.6E+00	2.6E+00	DTSC	3.1E+02	3.1E+02	3.1E+02	USEPA
Dimethylaniline, N,N-	121-69-7	--	--	--	--	2.0E-03	IRIS	8.0E+00	Route	--	--	--	--	1.6E+02	9.8E+01	1.6E+02	USEPA	--	--	--	--	2.3E+03	7.5E+02	7.5E+02	DTSC
Epichlorohydrin	106-89-8	8.0E-02	OEHHA	2.3E-05	OEHHA	6.0E-03	PPRTV	1.0E+00	IRIS	2.7E+01	1.8E+00	1.8E+00	DTSC	1.9E+01	5.3E+01	1.9E+01	USEPA	1.2E+02	8.2E+00	8.2E+00	DTSC	8.3E+01	2.4E+02	8.3E+01	USEPA
Ethyl Chloride (Chloroethane)	75-00-3	4.7E-03	OEHHA NSRL	1.2E-06	Route	--	--	1.0E+04	IRIS	--	3.1E+00	3.1E+00	DTSC	1.4E+04	4.1E+04	1.4E+04	USEPA	--	1.3E+01	1.3E+01	DTSC	5.7E+04	1.7E+05	5.7E+04	USEPA
Ethyl Ether	60-29-7	--	--	--	--	2.0E-01	IRIS	8.0E+02	Route	--	--	--	--	1.6E+04	2.3E+03	2.3E+03	DTSC	--	--	--	--	2.3E+05	1.1E+04	1.1E+04	DTSC
Furans																									
~Furan	110-00-9	--	--	--	--	1.0E-03	IRIS	4.0E+00	Route	--	--	--	--	7.3E+01	9.6E+00	9.6E+00	DTSC	--	--	--	--	1.0E+03	4.4E+01	4.4E+01	DTSC
Hexachlorobutadiene	87-68-3	7.8E-02	IRIS	2.2E-05	IRIS	1.0E-03	PPRTV	4.0E+00	Route	1.2E+00	1.2E+00	1.2E+00	USEPA	7.8E+01	2.9E+01	7.8E+01	USEPA	5.3E+00	5.3E+00	5.3E+00	USEPA	1.2E+03	1.6E+02	1.6E+02	DTSC
Hexachlorocyclohexane, Technical	608-73-1	4.0E+00	OEHHA	1.1E-03	OEHHA	--	--	--	--	3.0E-01	1.3E-01	3.0E-01	USEPA	--	--	--	--	1.3E+00	3.7E-01	3.7E-01	DTSC	--	--	--	--
Isobutyl Alcohol	78-83-1	--	--	--	--	3.0E-01	IRIS	1.2E+03	Route	--	--	--	--	2.3E+04	1.4E+04	2.3E+04	USEPA	--	--	--	--	3.5E+05	1.1E+05	1.1E+05	DTSC
Lead Compounds																									
~Lead subacetate	1335-32-6	3.8E-02	OEHHA	1.1E-05	OEHHA	--	--	--	--	6.4E+01	1.4E+01	1.4E+01	DTSC	--	--	--	--	2.7E+02	3.9E+01	3.9E+01	DTSC	--	--	--	--
~Tetraethyl Lead	78-00-2	--	--	--	--	1.0E-07	IRIS	4.0E-04	Route	--	--	--	--	7.8E-03	7.3E-04	7.3E-04	DTSC	--	--	--	--	1.2E-01	3.3E-03	3.3E-03	DTSC
Lewisite	541-25-3	--	--	--	--	5.0E-06	PPRTV	2.0E-02	Route	--	--	--	--	3.9E-01	2.3E-01	3.9E-01	USEPA	--	--	--	--	5.8E+00	1.6E+00	1.6E+00	DTSC
Manganese (Non-diet)	7439-96-5 (non-diet)	--	--	--	--	2.4E-02	non-diet; IRIS	9.0E-02	OEHHA	--	--	--	--	1.8E+03	1.1E+03	1.8E+03	USEPA	--	--	--	--	2.6E+04	6.9E+03	6.9E+03	DTSC
Mercury Compounds																									
~Mercuric Chloride (and other Mercury salts)	7487-94-7	--	--	--	--	1.6E-04	OEHHA	3.0E-02	OEHHA	--	--	--	--	2.3E+01	8.8E+00	2.3E+01	USEPA	--	--	--	--	3.5E+02	6.9E+01	6.9E+01	DTSC
~Mercury (elemental)	7439-97-6	--	--	--	--	1.6E-04	OEHHA	3.0E-02	OEHHA	--	--	--	--	1.1E+01	1.0E+00	1.0E+00	DTSC	--	--	--	--	4.6E+01	4.5E+00	4.5E+00	DTSC
Methyl Acetate	79-20-9	--	--	--	--	1.0E+00	Screening PPRTV	4.0E+03	Route	--	--	--	--	7.8E+04	2.4E+04	2.4E+04	DTSC	--	--	--	--	1.2E+06	1.3E+05	1.3E+05	DTSC
Methylene Chloride	75-09-2	1.4E-02	OEHHA	1.0E-06	OEHHA	6.0E-03	IRIS	6.0E+02	IRIS	5.7E+01	1.9E+00	1.9E+00	DTSC	3.5E+02	3.1E+02	3.5E+02	USEPA	1.0E+03	2.4E+01	2.4E+01	DTSC	3.2E+03	2.5E+03	3.2E+03	USEPA
Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	1.5E+00	OEHHA	4.3E-04	OEHHA	2.0E-03	PPRTV	--	--	1.2E+00	7.8E-02	7.8E-02	DTSC	1.3E+02	1.2E+02	1.3E+02	USEPA	2.3E+01	9.9E-01	9.9E-01	DTSC	1.6E+03	1.1E+03	1.6E+03	USEPA
Methylstyrene, Alpha-	98-83-9	--	--	--	--	7.0E-02	HEAST	2.8E+02	Route	--	--	--	--	5.5E+03	2.2E+03	5.5E+03	USEPA	--	--	--	--	8.2E+04	1.3E+04	1.3E+04	DTSC
Mineral oils	8012-95-1	--	--	--	--	3.0E+00	PPRTV	1.2E+04	Route	--	--	--	--	2.3E+05	1.6E+04	1.6E+04	DTSC	--	--	--	--	3.5E+06	7.2E+04	7.2E+04	DTSC
Nickel Hydroxide	12054-48-7	--	--	2.6E-04	OEHHA	1.1E-02	OEHHA	1.4E-02	OEHHA	1.5E+04	1.5E+04	1.5E+04	USEPA	8.2E+02	4.9E+02	8.2E+02	USEPA	6.4E+04	6.4E+04	6.4E+04	USEPA	1.1E+04	3.1E+03	3.1E+03	DTSC
Nickel Oxide	1313-99-1	--	--	2.6E-04	OEHHA	1.1E-02	OEHHA	2.0E-02	OEHHA	1.5E+04	1.5E+04	1.5E+04	USEPA	8.4E+02	4.9E+02	8.4E+02	USEPA	6.4E+04	6.4E+04	6.4E+04	USEPA	1.2E+04	3.1E+03	3.1E+03	DTSC
Nickel Refinery Dust	Nickel refinery dust	9.1E-01	OEHHA	2.6E-04	OEHHA	1.1E-02	OEHHA	1.4E-02	OEHHA	1.6E+04	4.2E-01	4.2E-01	DTSC	8.2E+02	4.9E+02	8.2E+02	USEPA	6.9E+04	8.9E-01	8.9E-01	DTSC	1.1E+04	3.1E+03	3.1E+03	DTSC
Nickel Soluble Salts	7440-02-0	--	--	2.6E-04	OEHHA	1.1E-02	OEHHA	1.4E-02	OEHHA	1.5E+04	1.5E+04	1.5E+04	USEPA	1.5E+03	4.9E+02	4.9E+02	DTSC	6.4E+04	6.4E+04	6.4E+04	USEPA	2.2E+04	3.1E+03	3.1E+03	DTSC
Nickel Subsulfide	12035-72-2	1.7E+00	OEHHA	4.9E-04	OEHHA	1.1E-02	OEHHA	1.4E-02	OEHHA	4.1E-01	2.3E-01	4.1E-01	USEPA	8.2E+02	4.9E+02	8.2E+02	USEPA	1.9E+00	4.8E-01	4.8E-01	DTSC	1.1E+04	3.1E+03	3.1E+03	DTSC
Pentachloroethane	76-01-7	9.0E-02	PPRTV	2.3E-05	Route	--	--	--	--	7.7E+00	1.1E+00	1.1E+00	DTSC	--	--	--	--	3.6E+01	4.6E+00	4.6E+00	DTSC	--	--	--	--
Phosphorus, White	7723-14-0	--	--	--	--	2.0E-05	IRIS	8.0E-02	Route	--	--	--	--	1.6E+00	4.3E-01	4.3E-01	DTSC	--	--	--	--	2.3E+01	2.2E+00	2.2E+00	DTSC
Phthalates																									
~Dimethylterephthalate	120-61-6	--	--	--	--	1.0E-01	IRIS	4.0E+02	Route	--	--	--	--	7.8E+03	4.2E+03	7.8E+03	USEPA	--	--	--	--	1.2E+05	2.9E+04	2.9E+04	DTSC
Silver	7440-22-4	--	--	--	--	5.0E-03	IRIS	--	--	--	--	--	--	3.9E+02	2.3E+02	3.9E+02	USEPA	--	--	--	--	5.8E+03	1.5E+03	1.5E+03	DTSC
Tetrachloroethane, 1,1,1,2-	630-20-6	2.6E-02	IRIS	7.4E-06	IRIS	3.0E-02	IRIS	1.2E+02	Route	2.0E+00	2.0E+00	2.0E+00	USEPA	2.3E+03	5.5E+02	5.5E+02	DTSC	8.9E+00	8.9E+00	8.9E+00	USEPA	3.5E+04	2.8E+03	2.8E+03	DTSC
Tetrachloroethane, 1,1,2,2-	79-34-5	2.0E-01	IRIS	5.8E-05	OEHHA	2.0E-02	IRIS	8.0E+01	Route	6.1E-01	5.8E-01	6.1E-01	USEPA	1.6E+03	7.0E+02	1.6E+03	USEPA	2.7E+00	2.6E+00	2.7E+00	USEPA	2.3E+04	4.4E+03	4.4E+03	DTSC
Tetrachloroethylene	127-18-4	5.4E-01	OEHHA PHG	5.9E-06	OEHHA	6.0E-03	IRIS	4.0E+01	IRIS	2.4E+01	6.0E-01	6.0E-01	DTSC	8.2E+01	7.3E+01	8.2E+01	USEPA	1.0E+02	2.7E+00	2.7E+00	DTSC	3.9E+02	3.5E+02	3.9E+02	USEPA
Toluene	108-88-3	--	--	--	--	8.0E-02	IRIS	3.0E+02	OEHHA	--	--	--	--	4.9E+03	1.1E+03	1.1E+03	DTSC	--	--	--	--	4.7E+04	5.4E+03	5.4E+03	DTSC
Tri-n-butyltin	688-73-3	--	--	--	--	3.0E-04	PPRTV	1.2E+00	Route	--	--	--	--	2.3E+01	3.6E+00	3.6E+00	DTSC	--	--	--	--	3.5E+02	1.7E+01	1.7E+01	DTSC
Trichlorobenzene, 1,2,3-	87-61-6	--	--	--	--	8.0E-04	Screening PPRTV	3.2E+00	Route	--	--	--	--	6.3E+01	4.0E+01	6.3E+01	USEPA	--	--	--	--	9.3E+02	3.1E+02	3.1E+02	DTSC
Trichloroethane, 1,1,1-	71-55-6	--	--	--	--	2.0E+00	IRIS	1.0E+03	OEHHA	--	--	--	--	8.2E+03	1.7E+03	1.7E+03	DTSC	--	--	--	--	3.6E+04	7.3E+03	7.3E+03	DTSC
Trichlorofluoromethane	75-69-4	--	--	--	--	3.0E-01	IRIS	1.2E+03	Route	--	--	--	--	2.3E+04	1.2E+03	1.2E+03	DTSC	--	--	--	--	3.5E+05	5.4E+03	5.4E+03	DTSC
Trichlorophenol, 2,4,6-	88-06-2	7.0E-02	OEHHA	2.0E-05	OEHHA	1.0E-03	PPRTV	--	--	4.9E+01	7.5E+00	7.5E+00	DTSC	6.3E+01	6.1E+01	6.3E+01	USEPA	2.1E+02	2.1E+01	2.1E+01	DTSC	8.2E+02	5.3E+02	8.2E+02	USEPA
Trichloropropane, 1,1,2-	598-77-6	--	--	--	--	5.0E-03	IRIS	2.0E+01	Route	--	--	--	--	3.9E+02	1.8E+02	3.9E+02	USEPA	--	--	--	--	5.8E+03	1.1E+03	1.1E+03	DTSC
Trichloropropane, 1,2,3-	96-18-4	3.0E+01	IRIS	7.5E-03	Route	4.0E-03	IRIS	3.0E-01	IRIS	5.1E-03	1.5E-03	1.5E-03	DTSC	4.9E+00	4.9E+00	4.9E+00	USEPA	1.1E-01	2.1E-02	2.1E-02	DTSC	2.1E+01	2.1E+01	2.1E+01	USEPA
Trimethylbenzene, 1,3,5-	108-67-8	--	--	--	--	1.0E-02	Screening PPRTV	4.0E+01	Route	--	--	--	--	7.8E+02	2.1E+02	2.1E+02	DTSC	--	--	--	--	1.2E+04	1.1E+03	1.1E+03	DTSC
Trimethylpentene, 2,4,4-	25167-70-8	--	--	--	--	1.0E-02	Screening PPRTV	4.0E+01	Route	--	--	--	--	7.8E+02	4.0E+01	4.0E+01	DTSC	--	--	--	--	1.2E+04	1.7E+02	1.7E+02	DTSC
Vanadium and Compounds	7440-62-2	--	--	--	--	5.0E-03	RSL	1.0E-01	ATSDR	--	--	--	--	3.9E+02	1.9E+02	3.9E+02	USEPA	--	--	--	--	5.8E+03	1.0E+03	1.0E+03	DTSC
Vinyl Chloride	75-01-4	2.7E-01	OEHHA	7.8E-05	OEHHA	3.0E-03	IRIS	1.0E+02	IRIS	5.9E-02	8.8E-03	8.8E-03	DTSC	7.0E+01	7.0E+01	7.0E+01	USEPA	1.7E+00	1.5E-01	1.5E-01	DTSC	3.8E+02	3.8E+02	3.8E+02	USEPA
Additional Analytes																									
Beryllium Sulfate	13510-49-1	--	--	8.6E-01	OEHHA	2.0E-04	OEHHA PHG	7.0E-03	OEHHA	1.6E+03	4.4E+00	4.4E+00	DTSC	1.6E+02	1.5E+01	1.5E+01	DTSC	6.9E+03	1.9E+01	1.9E+01	DTSC	2.3E+03	2.1E+02	2.1E+02	DTSC
Dichlorobenzene, 1,3-	541-73-1	--	--	--	--	3.0E-02	DTSC J&E	1.2E+02	Route	--	--	--	--	--	2.4E+02	2.4E+02	DTSC	--	--	--	--	--	1.1E+03	1.1E+03	DTSC
Methylcyclohexane	108-87-2	--	--	--	--	--	--	6.0E+03	Cyclohexane	--	--	--	--	--	5.5E+03	5.5E+03	DTSC	--	--	--	--	--	2.3E+04	2.3E+04	DTSC

"--" = no value

Table A-2a. Screening Levels for Residential Soil: Comparison of USEPA RSL and DTSC-SL Values

	USEPA RSL for Residential Soil (mg/kg)								DTSC-SL for Residential Soil (mg/kg)							
	Cancer Endpoint				Noncancer Endpoint				Cancer Endpoint				Noncancer Endpoint			
Analyte	USEPA RSL_{ing}	USEPA RSL_{D}	USEPA RSL_{inh}	USEPA $RSL_{Combined}$	USEPA RSL_{ing}	USEPA RSL_{D}	USEPA RSL_{inh}	USEPA $RSL_{Combined}$	DTSC-SL_{ing}	DTSC-SL_{D}	DTSC-SL_{inh}	DTSC-$SL_{Combined}$	DTSC-SL_{ing}	DTSC-SL_{D}	DTSC-SL_{inh}	DTSC-$SL_{Combined}$
USEPA RSL Analytes																
Acrylamide	3.06E-01	1.19E+00	1.38E+04	2.44E-01	1.56E+02	6.59E+02	8.51E+06	1.26E+02	3.40E-02	1.12E-01	1.06E+03	2.61E-02	1.56E+02	5.39E+02	8.51E+06	1.21E+02
Acrylonitrile	1.29E+00	--	3.22E-01	2.57E-01	3.13E+03	--	1.63E+01	1.62E+01	6.95E-01	--	7.55E-02	6.81E-02	3.13E+03	--	4.06E+01	4.01E+01
Arsenic, Inorganic	7.72E-01	5.49E+00	8.88E+02	6.77E-01	3.91E+01	3.30E+02	2.13E+04	3.49E+01	7.32E-02	7.59E-01	1.16E+03	6.67E-02	2.74E-01	3.15E+00	2.13E+04	2.52E-01
Benzaldehyde	--	--	--	--	7.82E+03	--	--	7.82E+03	--	--	--	--	7.82E+03	--	9.51E+03	4.29E+03
Benzene	1.26E+01	--	1.29E+00	1.17E+00	3.13E+02	--	1.12E+02	8.26E+01	6.95E+00	--	3.47E-01	3.31E-01	3.13E+02	--	1.12E+01	1.08E+01
Benzenethiol	--	--	--	--	7.82E+01	--	--	7.82E+01	--	--	--	--	7.82E+01	--	8.21E+01	4.00E+01
Benzidine	6.66E-04	2.59E-03	2.06E+01	5.30E-04	2.35E+02	9.89E+02	--	1.90E+02	3.06E-04	1.01E-03	9.85E+00	2.35E-04	2.35E+02	8.09E+02	--	1.82E+02
Beryllium and compounds	--	--	1.59E+03	1.59E+03	1.56E+02	--	2.84E+04	1.56E+02	--	--	1.59E+03	1.59E+03	1.56E+01	5.39E+02	9.93E+03	1.52E+01
Bromodichloromethane	1.12E+01	--	3.05E-01	2.97E-01	1.56E+03	--	--	1.56E+03	5.35E+00	--	3.05E-01	2.89E-01	1.56E+03	--	3.35E+02	2.76E+02
Bromoform	8.80E+01	--	2.51E+01	1.95E+01	1.56E+03	--	--	1.56E+03	6.32E+01	--	2.51E+01	1.80E+01	1.56E+03	--	8.21E+02	5.38E+02
Butadiene, 1,3-	2.04E-01	--	8.18E-02	5.85E-02	--	--	1.82E+00	1.82E+00	1.16E+00	--	1.44E-02	1.43E-02	--	--	1.82E+00	1.82E+00
Butanol, N-	--	--	--	--	7.82E+03	--	--	7.82E+03	--	--	--	--	7.82E+03	--	1.27E+04	4.83E+03
Butylbenzene, n-	--	--	--	--	3.91E+03	--	--	3.91E+03	--	--	--	--	3.91E+03	--	1.72E+03	1.20E+03
Butylbenzene, sec-	--	--	--	--	7.82E+03	--	--	7.82E+03	--	--	--	--	7.82E+03	--	3.11E+03	2.22E+03
Butylbenzene, tert-	--	--	--	--	7.82E+03	--	--	7.82E+03	--	--	--	--	7.82E+03	--	3.12E+03	2.23E+03
Cadmium (Diet)	--	--	2.12E+03	2.12E+03	7.82E+01	8.24E+02	1.42E+04	7.11E+01	--	--	9.09E+02	9.09E+02	5.26E+00	1.24E+03	1.42E+04	5.23E+00
Carbon Tetrachloride	9.93E+00	--	7.07E-01	6.60E-01	3.13E+02	--	1.58E+02	1.05E+02	4.63E+00	--	1.01E-01	9.89E-02	3.13E+02	--	6.31E+01	5.25E+01
Chlordane	1.99E+00	1.77E+01	2.57E+01	1.67E+00	3.91E+01	4.12E+02	6.68E+02	3.39E+01	5.35E-01	3.33E+00	7.55E+00	4.34E-01	3.91E+01	2.70E+02	6.68E+02	3.25E+01
Chloro-2-methylaniline, 4-	6.95E+00	2.47E+01	4.96E+04	5.43E+00	2.35E+02	9.89E+02	--	1.90E+02	2.57E+00	8.01E+00	4.96E+04	1.95E+00	2.35E+02	8.09E+02	--	1.82E+02
Chloroacetaldehyde, 2-	2.57E+00	--	--	2.57E+00	--	--	--	--	2.57E+00	--	6.84E-01	5.41E-01	--	--	--	--
Chlorobutane, 1-	--	--	--	--	3.13E+03	--	--	3.13E+03	--	--	--	--	3.13E+03	--	2.97E+02	2.71E+02
Chlorotoluene, o-	--	--	--	--	1.56E+03	--	--	1.56E+03	--	--	--	--	1.56E+03	--	6.87E+02	4.77E+02
Chlorotoluene, p-	--	--	--	--	1.56E+03	--	--	1.56E+03	--	--	--	--	1.56E+03	--	6.17E+02	4.42E+02
Chromium(III), Insoluble Salts	--	--	--	--	1.17E+05	--	--	1.17E+05	--	--	--	--	1.17E+05	5.26E+04	--	3.63E+04
Crotonaldehyde, trans-	3.66E-01	--	--	3.66E-01	7.82E+01	--	--	7.82E+01	3.66E-01	--	1.13E-01	8.65E-02	7.82E+01	--	8.00E+01	3.95E+01
Cyanides																
~Cyanogen	--	--	--	--	7.82E+01	--	--	7.82E+01	--	--	--	--	7.82E+01	--	4.81E+00	4.53E+00
~Cyanogen Bromide	--	--	--	--	7.04E+03	--	--	7.04E+03	--	--	--	--	7.04E+03	--	3.25E+02	3.10E+02
~Cyanogen Chloride	--	--	--	--	3.91E+03	--	--	3.91E+03	--	--	--	--	3.91E+03	--	3.66E+02	3.35E+02
~Potassium Silver Cyanide	--	--	--	--	3.91E+02	--	--	3.91E+02	--	--	--	--	3.91E+02	5.39E+02	--	2.27E+02
~Silver Cyanide	--	--	--	--	7.82E+03	--	--	7.82E+03	--	--	--	--	7.82E+03	1.08E+04	--	4.53E+03
Dibromobenzene, 1,3-	--	--	--	--	3.13E+01	--	--	3.13E+01	--	--	--	--	3.13E+01	--	3.27E+01	1.60E+01
Dibromobenzene, 1,4-	--	--	--	--	7.82E+02	--	--	7.82E+02	--	--	--	--	7.82E+02	--	9.31E+02	4.25E+02
Dibromochloromethane	8.28E+00	--	--	8.28E+00	1.56E+03	--	--	1.56E+03	8.28E+00	--	1.08E+00	9.53E-01	1.56E+03	--	6.72E+02	4.70E+02
Dibromoethane, 1,2-	3.48E-01	--	4.10E-02	3.67E-02	7.04E+02	--	8.23E+01	7.37E+01	1.93E-01	--	3.47E-01	1.24E-01	7.04E+02	--	7.31E+00	7.24E+00
Dichlorobenzidine, 3,3'-	1.54E+00	5.49E+00	1.12E+04	1.21E+00	--	--	--	--	5.79E-01	1.80E+00	1.12E+04	4.38E-01	--	--	--	--
Dichloroethane, 1,1-	1.22E+02	--	3.71E+00	3.60E+00	1.56E+04	--	--	1.56E+04	1.22E+02	--	3.71E+00	3.60E+00	1.56E+04	--	1.76E+03	1.58E+03
Dichloroethylene, 1,2-cis-	--	--	--	--	1.56E+02	--	--	1.56E+02	--	--	--	--	1.56E+02	--	2.11E+01	1.86E+01
Dichloroethylene, 1,2-trans-	--	--	--	--	1.56E+03	--	--	1.56E+03	--	--	--	--	1.56E+03	--	1.48E+02	1.35E+02
Dichloropropane, 1,3-	--	--	--	--	1.56E+03	--	--	1.56E+03	--	--	--	--	1.56E+03	--	5.72E+02	4.19E+02
Dichloropropene, 1,3-	6.95E+00	--	2.53E+00	1.85E+00	2.35E+03	--	7.52E+01	7.28E+01	7.64E+00	--	6.32E-01	5.84E-01	2.35E+03	--	7.52E+01	7.28E+01
Dimethylaniline, N,N-	--	--	--	--	1.56E+02	--	--	1.56E+02	--	--	--	--	1.56E+02	--	2.64E+02	9.83E+01
Epichlorohydrin	7.02E+01	--	4.48E+01	2.74E+01	4.69E+02	--	2.00E+01	1.92E+01	8.69E+00	--	2.34E+00	1.84E+00	4.69E+02	--	5.99E+01	5.31E+01
Ethyl Chloride (Chloroethane)	--	--	--	--	--	--	1.37E+04	1.37E+04	1.48E+02	--	3.13E+00	3.07E+00	--	--	4.10E+04	4.10E+04
Ethyl Ether	--	--	--	--	1.56E+04	--	--	1.56E+04	--	--	--	--	1.56E+04	--	2.64E+03	2.26E+03
Furans																
~Furan	--	--	--	--	7.82E+01	1.10E+03	--	7.30E+01	--	--	--	--	7.82E+01	8.99E+02	1.11E+01	9.59E+00
Hexachlorobutadiene	8.91E+00	--	1.40E+00	1.21E+00	7.82E+01	--	--	7.82E+01	8.91E+00	--	1.40E+00	1.21E+00	7.82E+01	--	4.56E+01	2.88E+01
Hexachlorocyclohexane, Technical	3.86E-01	1.37E+00	7.48E+03	3.01E-01	--	--	--	--	1.74E-01	5.41E-01	3.47E+03	1.32E-01	--	--	--	--
Isobutyl Alcohol	--	--	--	--	2.35E+04	--	--	2.35E+04	--	--	--	--	2.35E+04	--	3.57E+04	1.42E+04
Lead Compounds																
~Lead subacetate	8.18E+01	2.91E+02	3.18E+05	6.38E+01	--	--	--	--	1.83E+01	5.69E+01	3.47E+05	1.38E+01	--	--	--	--
~Tetraethyl Lead	--	--	--	--	7.82E-03	--	--	7.82E-03	--	--	--	--	7.82E-03	--	8.06E-04	7.31E-04
Lewisite	--	--	--	--	3.91E-01	--	--	3.91E-01	--	--	--	--	3.91E-01	--	5.40E-01	2.27E-01
Manganese (Non-diet)	--	--	--	--	1.88E+03	--	7.09E+04	1.83E+03	--	--	--	--	1.88E+03	2.59E+03	1.28E+05	1.08E+03
Mercury Compounds																
~Mercuric Chloride (and other Mercury salts)	--	--	--	--	2.35E+01	--	4.25E+05	2.35E+01	--	--	--	--	1.25E+01	3.02E+01	4.25E+04	8.85E+00
~Mercury (elemental)	--	--	--	--	--	--	1.10E+01	1.10E+01	--	--	--	--	1.25E+01	4.32E+02	1.10E+00	1.01E+00
Methyl Acetate	--	--	--	--	7.82E+04	--	--	7.82E+04	--	--	--	--	7.82E+04	--	3.43E+04	2.39E+04
Methylene Chloride	7.66E+01	--	2.25E+02	5.71E+01	4.69E+02	--	1.39E+03	3.51E+02	1.09E+01	--	2.25E+00	1.87E+00	4.69E+02	--	9.27E+02	3.12E+02
Methylene-bis(2-chloroaniline), 4,4'-	1.53E+00	5.97E+00	3.21E+03	1.22E+00	1.56E+02	6.59E+02	--	1.26E+02	1.02E-01	3.36E-01	3.21E+03	7.83E-02	1.56E+02	5.39E+02	--	1.21E+02
Methylstyrene, Alpha-	--	--	--	--	5.48E+03	--	--	5.48E+03	--	--	--	--	5.48E+03	--	3.79E+03	2.24E+03
Mineral oils	--	--	--	--	2.35E+05	--	--	2.35E+05	--	--	--	--	2.35E+05	--	1.74E+04	1.62E+04
Nickel Hydroxide	--	--	1.47E+04	1.47E+04	8.60E+02	--	1.98E+04	8.25E+02	--	--	1.47E+04	1.47E+04	8.60E+02	1.19E+03	1.99E+04	4.87E+02
Nickel Oxide	--	--	1.47E+04	1.47E+04	8.60E+02	--	2.84E+04	8.35E+02	--	--	1.47E+04	1.47E+04	8.60E+02	1.19E+03	2.84E+04	4.90E+02
Nickel Refinery Dust	--	--	1.59E+04	1.59E+04	8.60E+02	--	1.98E+04	8.25E+02	7.64E-01	9.51E-01	1.47E+04	4.24E-01	8.60E+02	1.19E+03	1.99E+04	4.87E+02
Nickel Soluble Salts	--	--	1.47E+04	1.47E+04	1.56E+03	--	1.28E+05	1.55E+03	--	--	1.47E+04	1.47E+04	8.60E+02	1.19E+03	1.99E+04	4.87E+02
Nickel Subsulfide	4.09E-01	--	7.95E+03	4.09E-01	8.60E+02	--	1.98E+04	8.25E+02	4.09E-01	5.09E-01	7.79E+03	2.27E-01	8.60E+02	1.19E+03	1.99E+04	4.87E+02
Pentachloroethane	7.72E+00	--	--	7.72E+00	--	--	--	--	7.72E+00	--	1.22E+00	1.05E+00	--	--	--	--
Phosphorus, White	--	--	--	--	1.56E+00	--	--	1.56E+00	--	--	--	--	1.56E+00	--	5.84E-01	4.25E-01
Phthalates																
~Dimethylterephthalate	--	--	--	--	7.82E+03	--	--	7.82E+03	--	--	--	--	7.82E+03	--	9.03E+03	4.19E+03
Silver	--	--	--	--	3.91E+02	--	--	3.91E+02	--	--	--	--	3.91E+02	5.39E+02	--	2.27E+02
Tetrachloroethane, 1,1,1,2-	2.67E+01	--	2.18E+00	2.02E+00	2.35E+03	--	--	2.35E+03	2.67E+01	--	2.18E+00	2.02E+00	2.35E+03	--	7.20E+02	5.51E+02
Tetrachloroethane, 1,1,2,2-	3.48E+00	--	7.42E-01	6.11E-01	1.56E+03	--	--	1.56E+03	2.57E+00	--	7.42E-01	5.76E-01	1.56E+03	--	1.28E+03	7.04E+02
Tetrachloroethylene	3.31E+02	--	2.57E+01	2.38E+01	4.69E+02	--	9.92E+01	8.19E+01	1.29E+00	--	1.13E+00	6.02E-01	4.69E+02	--	8.68E+01	7.33E+01
Toluene	--	--	--	--	6.26E+03	--	2.27E+04	4.90E+03	--	--	--	--	6.26E+03	--	1.36E+03	1.12E+03
Tri-n-butyltin	--	--	--	--	2.35E+01	--	--	2.35E+01	--	--	--	--	2.35E+01	--	4.26E+00	3.61E+00
Trichlorobenzene, 1,2,3-	--	--	--	--	6.26E+01	--	--	6.26E+01	--	--	--	--	6.26E+01	--	1.09E+02	3.98E+01
Trichloroethane, 1,1,1-	--	--	--	--	1.56E+05	--	8.70E+03	8.24E+03	--	--	--	--	1.56E+05	--	1.74E+03	1.72E+03
Trichlorofluoromethane	--	--	--	--	2.35E+04	--	--	2.35E+04	--	--	--	--	2.35E+04	--	1.31E+03	1.24E+03
Trichlorophenol, 2,4,6-	6.32E+01	2.25E+02	1.23E+06	4.93E+01	7.82E+01	3.30E+02	--	6.32E+01	9.93E+00	3.09E+01	1.91E+05	7.52E+00	7.82E+01	2.70E+02	--	6.06E+01
Trichloropropane, 1,1,2-	--	--	--	--	3.91E+02	--	--	3.91E+02	--	--	--	--	3.91E+02	--	3.18E+02	1.75E+02
Trichloropropane, 1,2,3-	5.10E-03	--	--	5.10E-03	3.13E+02	--	4.98E+00	4.91E+00	5.10E-03	--	2.15E-03	1.51E-03	3.13E+02	--	4.98E+00	4.91E+00
Trimethylbenzene, 1,3,5-	--	--	--	--	7.82E+02	--	--	7.82E+02	--	--	--	--	7.82E+02	--	2.80E+02	2.06E+02
Trimethylpentene, 2,4,4-	--	--	--	--	7.82E+02	--	--	7.82E+02	--	--	--	--	7.82E+02	--	4.22E+01	4.00E+01
Vanadium and Compounds	--	--	--	--	3.94E+02	--	1.42E+05	3.93E+02	--	--	--	--	3.94E+02	3.53E+02	1.42E+05	1.86E+02
Vinyl Chloride	9.40E-02	--	1.62E-01	5.95E-02	2.35E+02	--	1.01E+02	7.05E+01	2.51E-01	--	9.13E-03	8.81E-03	2.35E+02	--	1.01E+02	7.05E+01
Additional Analytes																
Beryllium Sulfate	--	--	1.59E+03	1.59E+03	1.56E+02	--	2.84E+04	1.56E+02	--	--	4.44E+00	4.44E+00	1.56E+01	5.39E+02	9.93E+03	1.52E+01
Dichlorobenzene, 1,3-	--	--	--	--	--	--	--	--	--	--	--	--	2.35E+03	--	2.73E+02	2.44E+02
Methylcyclohexane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.54E+03	5.54E+03

"--" = no value

Table A-2b. Screening Levels for Commercial/Industrial Soil: Comparison of USEPA RSL and DTSC-SL Values

	USEPA RSL for Commercial/Industrial Soil (mg/kg)								DTSC-SL for Commercial/Industrial Soil (mg/kg)							
	Cancer Endpoint				Noncancer Endpoint				Cancer Endpoint				Noncancer Endpoint			
Analyte	USEPA RSL_{ing}	USEPA RSL_{D}	USEPA RSL_{inh}	USEPA $RSL_{Combined}$	USEPA RSL_{ing}	USEPA RSL_{D}	USEPA RSL_{inh}	USEPA $RSL_{Combined}$	DTSC-SL_{ing}	DTSC-SL_{D}	DTSC-SL_{inh}	DTSC-$SL_{Combined}$	DTSC-SL_{ing}	DTSC-SL_{D}	DTSC-SL_{inh}	DTSC-$SL_{Combined}$
USEPA RSL Analytes																
Acrylamide	6.54E+00	1.55E+01	1.67E+05	4.60E+00	2.34E+03	5.52E+03	3.57E+07	1.64E+03	7.27E-01	6.02E-01	1.28E+04	3.29E-01	2.34E+03	1.94E+03	3.57E+07	1.06E+03
Acrylonitrile	6.06E+00	--	1.41E+00	1.14E+00	4.67E+04	--	6.83E+01	6.82E+01	3.27E+00	--	3.30E-01	2.99E-01	4.67E+04	--	1.71E+02	1.70E+02
Arsenic, Inorganic	3.63E+00	1.72E+01	3.88E+03	3.00E+00	5.84E+02	2.76E+03	8.93E+04	4.79E+02	3.44E-01	9.51E-01	5.05E+03	2.53E-01	4.09E+00	1.13E+01	8.94E+04	3.00E+00
Benzaldehyde	--	--	--	--	1.17E+05	--	--	1.17E+05	--	--	--	--	1.17E+05	--	3.99E+04	2.98E+04
Benzene	5.95E+01	--	5.64E+00	5.15E+00	4.67E+03	--	4.71E+02	4.28E+02	3.27E+01	--	1.52E+00	1.45E+00	4.67E+03	--	4.71E+01	4.66E+01
Benzenethiol	--	--	--	--	1.17E+03	--	--	1.17E+03	--	--	--	--	1.17E+03	--	3.45E+02	2.66E+02
Benzidine	1.42E-02	3.36E-02	2.49E+02	9.99E-03	3.50E+03	8.28E+03	--	2.46E+03	6.54E-03	5.42E-03	1.19E+02	2.96E-03	3.50E+03	2.90E+03	--	1.59E+03
Beryllium and compounds	--	--	6.95E+03	6.95E+03	2.34E+03	--	1.19E+05	2.29E+03	--	--	6.95E+03	6.95E+03	2.34E+02	1.94E+03	4.17E+04	2.07E+02
Bromodichloromethane	5.27E+01	--	1.33E+00	1.30E+00	2.34E+04	--	--	2.34E+04	2.52E+01	--	1.33E+00	1.27E+00	2.34E+04	--	1.41E+03	1.33E+03
Bromoform	4.14E+02	--	1.10E+02	8.67E+01	2.34E+04	--	--	2.34E+04	2.97E+02	--	1.10E+02	8.01E+01	2.34E+04	--	3.45E+03	3.00E+03
Butadiene, 1,3-	9.62E-01	--	3.58E-01	2.61E-01	--	--	7.66E+00	7.66E+00	5.45E+00	--	6.31E-02	6.24E-02	--	--	7.66E+00	7.66E+00
Butanol, N-	--	--	--	--	1.17E+05	--	--	1.17E+05	--	--	--	--	1.17E+05	--	5.32E+04	3.65E+04
Butylbenzene, n-	--	--	--	--	5.84E+04	--	--	5.84E+04	--	--	--	--	5.84E+04	--	7.23E+03	6.44E+03
Butylbenzene, sec-	--	--	--	--	1.17E+05	--	--	1.17E+05	--	--	--	--	1.17E+05	--	1.31E+04	1.17E+04
Butylbenzene, tert-	--	--	--	--	1.17E+05	--	--	1.17E+05	--	--	--	--	1.17E+05	--	1.31E+04	1.18E+04
Cadmium (Diet)	--	--	9.26E+03	9.26E+03	1.17E+03	6.90E+03	5.95E+04	9.82E+02	--	--	3.97E+03	3.97E+03	7.36E+00	6.10E+02	5.96E+04	7.27E+00
Carbon Tetrachloride	4.67E+01	--	3.09E+00	2.90E+00	4.67E+03	--	6.62E+02	5.80E+02	2.18E+01	--	4.41E-01	4.33E-01	4.67E+03	--	2.65E+02	2.51E+02
Chlordane	9.34E+00	5.52E+01	1.12E+02	7.46E+00	5.84E+02	3.45E+03	2.80E+03	4.24E+02	2.52E+00	4.17E+00	3.30E+01	1.50E+00	5.84E+02	9.68E+02	2.80E+03	3.22E+02
Chloro-2-methylaniline, 4-	3.27E+01	7.73E+01	2.17E+05	2.30E+01	3.50E+03	8.28E+03	--	2.46E+03	1.21E+01	1.00E+01	2.17E+05	5.49E+00	3.50E+03	2.90E+03	--	1.59E+03
Chloroacetaldehyde, 2-	1.21E+01	--	--	1.21E+01	--	--	--	--	1.21E+01	--	2.99E+00	2.40E+00	--	--	--	--
Chlorobutane, 1-	--	--	--	--	4.67E+04	--	--	4.67E+04	--	--	--	--	4.67E+04	--	1.25E+03	1.21E+03
Chlorotoluene, o-	--	--	--	--	2.34E+04	--	--	2.34E+04	--	--	--	--	2.34E+04	--	2.89E+03	2.57E+03
Chlorotoluene, p-	--	--	--	--	2.34E+04	--	--	2.34E+04	--	--	--	--	2.34E+04	--	2.59E+03	2.33E+03
Chromium(III), Insoluble Salts	--	--	--	--	1.75E+06	--	--	1.75E+06	--	--	--	--	1.75E+06	1.89E+05	--	1.70E+05
Crotonaldehyde, trans-	1.72E+00	--	--	1.72E+00	1.17E+03	--	--	1.17E+03	1.72E+00	--	4.95E-01	3.85E-01	1.17E+03	--	3.36E+02	2.61E+02
Cyanides																
~Cyanogen	--	--	--	--	1.17E+03	--	--	1.17E+03	--	--	--	--	1.17E+03	--	2.02E+01	1.98E+01
~Cyanogen Bromide	--	--	--	--	1.05E+05	--	--	1.05E+05	--	--	--	--	1.05E+05	--	1.36E+03	1.35E+03
~Cyanogen Chloride	--	--	--	--	5.84E+04	--	--	5.84E+04	--	--	--	--	5.84E+04	--	1.54E+03	1.50E+03
~Potassium Silver Cyanide	--	--	--	--	5.84E+03	--	--	5.84E+03	--	--	--	--	5.84E+03	1.94E+03	--	1.45E+03
~Silver Cyanide	--	--	--	--	1.17E+05	--	--	1.17E+05	--	--	--	--	1.17E+05	3.87E+04	--	2.91E+04
Dibromobenzene, 1,3-	--	--	--	--	4.67E+02	--	--	4.67E+02	--	--	--	--	4.67E+02	--	1.37E+02	1.06E+02
Dibromobenzene, 1,4-	--	--	--	--	1.17E+04	--	--	1.17E+04	--	--	--	--	1.17E+04	--	3.91E+03	2.93E+03
Dibromochloromethane	3.89E+01	--	--	3.89E+01	2.34E+04	--	--	2.34E+04	3.89E+01	--	4.71E+00	4.20E+00	2.34E+04	--	2.82E+03	2.52E+03
Dibromoethane, 1,2-	1.64E+00	--	1.79E-01	1.61E-01	1.05E+04	--	3.46E+02	3.35E+02	9.08E-01	--	1.51E+00	5.68E-01	1.05E+04	--	3.07E+01	3.06E+01
Dichlorobenzidine, 3,3'-	7.27E+00	1.72E+01	4.90E+04	5.11E+00	--	--	--	--	2.73E+00	2.26E+00	4.91E+04	1.24E+00	--	--	--	--
Dichloroethane, 1,1-	5.74E+02	--	1.62E+01	1.57E+01	2.34E+05	--	--	2.34E+05	5.74E+02	--	1.62E+01	1.57E+01	2.34E+05	--	7.40E+03	7.17E+03
Dichloroethylene, 1,2-cis-	--	--	--	--	2.34E+03	--	--	2.34E+03	--	--	--	--	2.34E+03	--	8.88E+01	8.55E+01
Dichloroethylene, 1,2-trans-	--	--	--	--	2.34E+04	--	--	2.34E+04	--	--	--	--	2.34E+04	--	6.20E+02	6.04E+02
Dichloropropane, 1,3-	--	--	--	--	2.34E+04	--	--	2.34E+04	--	--	--	--	2.34E+04	--	2.40E+03	2.18E+03
Dichloropropene, 1,3-	3.27E+01	--	1.11E+01	8.26E+00	3.50E+04	--	3.16E+02	3.13E+02	3.59E+01	--	2.76E+00	2.57E+00	3.50E+04	--	3.16E+02	3.13E+02
Dimethylaniline, N,N-	--	--	--	--	2.34E+03	--	--	2.34E+03	--	--	--	--	2.34E+03	--	1.11E+03	7.53E+02
Epichlorohydrin	3.30E+02	--	1.96E+02	1.23E+02	7.01E+03	--	8.39E+01	8.29E+01	4.09E+01	--	1.02E+01	8.17E+00	7.01E+03	--	2.52E+02	2.43E+02
Ethyl Chloride (Chloroethane)	--	--	--	--	--	--	5.74E+04	5.74E+04	6.96E+02	--	1.37E+01	1.34E+01	--	--	1.72E+05	1.72E+05
Ethyl Ether	--	--	--	--	2.34E+05	--	--	2.34E+05	--	--	--	--	2.34E+05	--	1.11E+04	1.06E+04
Furans																
~Furan	--	--	--	--	1.17E+03	9.20E+03	--	1.04E+03	--	--	--	--	1.17E+03	3.23E+03	4.65E+01	4.41E+01
Hexachlorobutadiene	4.19E+01	--	6.10E+00	5.32E+00	1.17E+03	--	--	1.17E+03	4.19E+01	--	6.10E+00	5.32E+00	1.17E+03	--	1.92E+02	1.65E+02
Hexachlorocyclohexane, Technical	1.82E+00	4.29E+00	3.27E+04	1.28E+00	--	--	--	--	8.18E-01	6.78E-01	1.52E+04	3.71E-01	--	--	--	--
Isobutyl Alcohol	--	--	--	--	3.50E+05	--	--	3.50E+05	--	--	--	--	3.50E+05	--	1.50E+05	1.05E+05
Lead Compounds																
~Lead subacetate	3.85E+02	9.09E+02	1.39E+06	2.70E+02	--	--	--	--	8.61E+01	7.13E+01	1.52E+06	3.90E+01	--	--	--	--
~Tetraethyl Lead	--	--	--	--	1.17E-01	--	--	1.17E-01	--	--	--	--	1.17E-01	--	3.39E-03	3.29E-03
Lewisite	--	--	--	--	5.84E+00	--	--	5.84E+00	--	--	--	--	5.84E+00	--	2.27E+00	1.63E+00
Manganese (Non-diet)	--	--	--	--	2.80E+04	--	2.98E+05	2.56E+04	--	--	--	--	2.80E+04	9.29E+03	5.36E+05	6.89E+03
Mercury Compounds																
~Mercuric Chloride (and other Mercury salts)	--	--	--	--	3.50E+02	--	1.79E+06	3.50E+02	--	--	--	--	1.87E+02	1.08E+02	1.79E+05	6.86E+01
~Mercury (elemental)	--	--	--	--	--	--	4.62E+01	4.62E+01	--	--	--	--	1.87E+02	1.55E+03	4.62E+00	4.50E+00
Methyl Acetate	--	--	--	--	1.17E+06	--	--	1.17E+06	--	--	--	--	1.17E+06	--	1.44E+05	1.28E+05
Methylene Chloride	1.64E+03	--	2.72E+03	1.02E+03	7.01E+03	--	5.84E+03	3.18E+03	2.34E+02	--	2.72E+01	2.44E+01	7.01E+03	--	3.89E+03	2.50E+03
Methylene-bis(2-chloroaniline), 4,4'-	3.27E+01	7.73E+01	3.88E+04	2.30E+01	2.34E+03	5.52E+03	--	1.64E+03	2.18E+00	1.81E+00	3.88E+04	9.88E-01	2.34E+03	1.94E+03	--	1.06E+03
Methylstyrene, Alpha-	--	--	--	--	8.18E+04	--	--	8.18E+04	--	--	--	--	8.18E+04	--	1.59E+04	1.33E+04
Mineral oils	--	--	--	--	3.50E+06	--	--	3.50E+06	--	--	--	--	3.50E+06	--	7.32E+04	7.17E+04
Nickel Hydroxide	--	--	6.41E+04	6.41E+04	1.28E+04	--	8.34E+04	1.11E+04	--	--	6.42E+04	6.42E+04	1.28E+04	4.26E+03	8.34E+04	3.08E+03
Nickel Oxide	--	--	6.41E+04	6.41E+04	1.28E+04	--	1.19E+05	1.16E+04	--	--	6.42E+04	6.42E+04	1.28E+04	4.26E+03	1.19E+05	3.12E+03
Nickel Refinery Dust	--	--	6.95E+04	6.95E+04	1.28E+04	--	8.34E+04	1.11E+04	3.59E+00	1.19E+00	6.42E+04	8.95E-01	1.28E+04	4.26E+03	8.34E+04	3.08E+03
Nickel Soluble Salts	--	--	6.41E+04	6.41E+04	2.34E+04	--	5.36E+05	2.24E+04	--	--	6.42E+04	6.42E+04	1.28E+04	4.26E+03	8.34E+04	3.08E+03
Nickel Subsulfide	1.92E+00	--	3.47E+04	1.92E+00	1.28E+04	--	8.34E+04	1.11E+04	1.92E+00	6.38E-01	3.40E+04	4.79E-01	1.28E+04	4.26E+03	8.34E+04	3.08E+03
Pentachloroethane	3.63E+01	--	--	3.63E+01	--	--	--	--	3.63E+01	--	5.33E+00	4.65E+00	--	--	--	--
Phosphorus, White	--	--	--	--	2.34E+01	--	--	2.34E+01	--	--	--	--	2.34E+01	--	2.45E+00	2.22E+00
Phthalates																
~Dimethylterephthalate	--	--	--	--	1.17E+05	--	--	1.17E+05	--	--	--	--	1.17E+05	--	3.79E+04	2.86E+04
Silver	--	--	--	--	5.84E+03	--	--	5.84E+03	--	--	--	--	5.84E+03	1.94E+03	--	1.45E+03
Tetrachloroethane, 1,1,1,2-	1.26E+02	--	9.54E+00	8.87E+00	3.50E+04	--	--	3.50E+04	1.26E+02	--	9.54E+00	8.87E+00	3.50E+04	--	3.02E+03	2.78E+03
Tetrachloroethane, 1,1,2,2-	1.64E+01	--	3.24E+00	2.70E+00	2.34E+04	--	--	2.34E+04	1.21E+01	--	3.24E+00	2.56E+00	2.34E+04	--	5.37E+03	4.37E+03
Tetrachloroethylene	1.56E+03	--	1.12E+02	1.05E+02	7.01E+03	--	4.17E+02	3.93E+02	6.06E+00	--	4.94E+00	2.72E+00	7.01E+03	--	3.65E+02	3.47E+02
Toluene	--	--	--	--	9.34E+04	--	9.52E+04	4.72E+04	--	--	--	--	9.34E+04	--	5.71E+03	5.38E+03
Tri-n-butyltin	--	--	--	--	3.50E+02	--	--	3.50E+02	--	--	--	--	3.50E+02	--	1.79E+01	1.70E+01
Trichlorobenzene, 1,2,3-	--	--	--	--	9.34E+02	--	--	9.34E+02	--	--	--	--	9.34E+02	--	4.58E+02	3.07E+02
Trichloroethane, 1,1,1-	--	--	--	--	2.34E+06	--	3.66E+04	3.60E+04	--	--	--	--	2.34E+06	--	7.31E+03	7.29E+03
Trichlorofluoromethane	--	--	--	--	3.50E+05	--	--	3.50E+05	--	--	--	--	3.50E+05	--	5.50E+03	5.41E+03
Trichlorophenol, 2,4,6-	2.97E+02	7.02E+02	5.38E+06	2.09E+02	1.17E+03	2.76E+03	--	8.21E+02	4.67E+01	3.87E+01	8.34E+05	2.12E+01	1.17E+03	9.68E+02	--	5.29E+02
Trichloropropane, 1,1,2-	--	--	--	--	5.84E+03	--	--	5.84E+03	--	--	--	--	5.84E+03	--	1.34E+03	1.09E+03
Trichloropropane, 1,2,3-	1.09E-01	--	--	1.09E-01	4.67E+03	--	2.09E+01	2.08E+01	1.09E-01	--	2.60E-02	2.10E-02	4.67E+03	--	2.09E+01	2.08E+01
Trimethylbenzene, 1,3,5-	--	--	--	--	1.17E+04	--	--	1.17E+04	--	--	--	--	1.17E+04	--	1.17E+03	1.07E+03
Trimethylpentene, 2,4,4-	--	--	--	--	1.17E+04	--	--	1.17E+04	--	--	--	--	1.17E+04	--	1.77E+02	1.75E+02
Vanadium and Compounds	--	--	--	--	5.89E+03	--	5.95E+05	5.83E+03	--	--	--	--	5.89E+03	1.27E+03	5.96E+05	1.04E+03
Vinyl Chloride	4.54E+00	--	2.69E+00	1.69E+00	3.50E+03	--	4.23E+02	3.78E+02	1.21E+01	--	1.52E-01	1.50E-01	3.50E+03	--	4.23E+02	3.78E+02
Additional Analytes																
Beryllium Sulfate	--	--	6.95E+03	6.95E+03	2.34E+03	--	1.19E+05	2.29E+03	--	--	1.94E+01	1.94E+01	2.34E+02	1.94E+03	4.17E+04	2.07E+02
Dichlorobenzene, 1,3-	--	--	--	--	--	--	--	--	--	--	--	--	3.50E+04	--	1.14E+03	1.11E+03
Methylcyclohexane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.33E+04	2.33E+04

"--" = no value

Table A-3a. USEPA RSLs and DTSC-SLs for a Residential Receptor Exposed to Soil via Incidental Ingestion

Definition	Variable	USEPA Value	DTSC Value	Units
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	yrs
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	yrs
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	yrs
Age-dependent Adjustment Factor, 16-26	$ADAF_{16-26}$	1	1	yrs
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, adult	$AT_{nc,a}$	20	20	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
Body Weight, adult	BW_a	80	80	kg
Body Weight, child	BW_c	15	15	kg
Carcinogenic adjustment factor, ingestion	CAF_O	0.804	0.804	dimensionless
Conversion Factor	CF_o	1E-06	1E-06	kg/mg
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-26	ED_{16-26}	10	10	yrs
Exposure Duration, adult	ED_a	20	20	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Soil Ingestion Rate (adult)	IRS_a	100	100	mg/day
Soil Ingestion Rate (child)	IRS_c	200	200	mg/day
Mutagenic adjustment factor, ingestion	MAF_O	0.202	0.202	dimensionless
Relative Bioavailability	RBA	chemical-specific		dimensionless
Oral Reference Dose	RfD_O	chemical-specific		$(mg/kg\text{-}day)^{-1}$
(Regional) Screening Level, ingestion	$(R)SL_{Ing}$	derived herein		mg/kg
Oral Slope Factor	SF_O	chemical-specific		$(mg/kg\text{-}day)^{-1}$
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless

Equations

Carcinogens:

$$(R)SL_{ing}=\frac{TR\times(AT_c\times 365\ day/year)}{SF_o\times EF_r\times\left(\frac{ED_c\times IRS_c}{BW_c}+\frac{ED_a\times IRS_a}{BW_a}\right)\times CF_o\times RBA}$$

Mutagens:

$$(R)SL_{ing}=\frac{TR\times(AT_c\times 365\ days/year)}{SF_o\times EF_r\times\left(\frac{ED_{0-2}\times IRS_c\times ADAF_{0-2}}{BW_c}+\frac{ED_{2-6}\times IRS_c\times ADAF_{2-6}}{BW_c}+\frac{ED_{6-16}\times IRS_a\times ADAF_{6-16}}{BW_a}+\frac{ED_{16-26}\times IRS_a\times ADAF_{16-26}}{BW_a}\right)\times CF_o\times RBA}$$

Trichloroethene:

$$(R)SL_{ing}=\frac{TR\times(AT_c\times 365\ days/year)}{SF_o\times EF_r\times CF_o\times RBA\times\left\{\left(CAF_o\times\frac{ED_c\times IRS_c}{BW_c}+\frac{ED_a\times IRS_a}{BW_a}\right)+\left[MAF_o\times\left(\frac{ED_{0-2}\times IRS_c\times ADAF_{0-2}}{BW_c}+\frac{ED_{2-6}\times IRS_c\times ADAF_{2-6}}{BW_c}+\frac{ED_{6-16}\times IRS_a\times ADAF_{6-16}}{BW_a}+\frac{ED_{16-26}\times IRS_a\times ADAF_{16-26}}{BW_a}\right)\right]\right\}}$$

Vinyl Chloride:

$$(R)SL_{ing}=\frac{TR}{SF_o\times\left[\left(\frac{EF_r\times\left(\frac{ED_c\times IRS_c}{BW_c}+\frac{ED_a\times IRS_a}{BW_a}\right)\times CF_o}{AT_c\times 365\frac{days}{year}}\right)+\left(\frac{IRS_c\times CF_o}{BW_c}\right)\right]\times RBA}$$

Noncarcinogens:

$$(R)SL_{ing}=\frac{THQ\times\left(AT_{nc,c}\times 365\frac{day}{year}\right)\times BW_c}{EF_r\times ED_c\times\frac{1}{RfD_o}\times IRS_c\times CF_o\times RBA}$$

DTSC Cadmium - noncarcinogenic:

$$SL_{ing-adult,Cd}=\frac{THQ\times\left(AT_{nc,26-yr\ adult}\times 365\frac{day}{year}\right)\times BW_a}{EF_r\times ED_{26-yr\ adult}\times IRS_a\times\frac{1}{RfD_o}\times CF_o\times RBA}$$

		Residential USEPA RSL_{ing}					Residential DTSC-SL_{ing}				
		RBA	**SF_o**	**Cancer**	**RfD_o**	**Noncancer**	**RBA**	**SF_o**	**Cancer**	**RfD_o**	**Noncancer**
Analyte	**Mutagen?**	*(dimensionless)*	$(mg/kg\text{-}day)^{-1}$	(mg/kg)	(mg/kg-day)	(mg/kg)	*(dimensionless)*	$(mg/kg\text{-}day)^{-1}$	(mg/kg)	(mg/kg-day)	(mg/kg)
USEPA RSL Analytes											
Acrylamide	M	1	5.00E-01	3.06E-01	2.00E-03	1.56E+02	1	4.50E+00	3.40E-02	2.00E-03	1.56E+02
Acrylonitrile		1	5.40E-01	1.29E+00	4.00E-02	3.13E+03	1	1.00E+00	6.95E-01	4.00E-02	3.13E+03
Arsenic, Inorganic		0.6	1.50E+00	7.72E-01	3.00E-04	3.91E+01	1	9.50E+00	7.32E-02	3.50E-06	2.74E-01
Benzaldehyde		1	No Toxicity Value	--	1.00E-01	7.82E+03	1	No Toxicity Value	--	1.00E-01	7.82E+03
Benzene		1	5.50E-02	1.26E+01	4.00E-03	3.13E+02	1	1.00E-01	6.95E+00	4.00E-03	3.13E+02
Benzenethiol		1	No Toxicity Value	--	1.00E-03	7.82E+01	1	No Toxicity Value	--	1.00E-03	7.82E+01
Benzidine	M	1	2.30E+02	6.66E-04	3.00E-03	2.35E+02	1	5.00E+02	3.06E-04	3.00E-03	2.35E+02
Beryllium and compounds		1	No Toxicity Value	--	2.00E-03	1.56E+02	1	No Toxicity Value	--	2.00E-04	1.56E+01
Bromodichloromethane		1	6.20E-02	1.12E+01	2.00E-02	1.56E+03	1	1.30E-01	5.35E+00	2.00E-02	1.56E+03
Bromoform		1	7.90E-03	8.80E+01	2.00E-02	1.56E+03	1	1.10E-02	6.32E+01	2.00E-02	1.56E+03
Butadiene, 1,3-		1	3.40E+00	2.04E-01	No Toxicity Value	--	1	6.00E-01	1.16E+00	No Toxicity Value	--
Butanol, N-		1	No Toxicity Value	--	1.00E-01	7.82E+03	1	No Toxicity Value	--	1.00E-01	7.82E+03
Butylbenzene, n-		1	No Toxicity Value	--	5.00E-02	3.91E+03	1	No Toxicity Value	--	5.00E-02	3.91E+03
Butylbenzene, sec-		1	No Toxicity Value	--	1.00E-01	7.82E+03	1	No Toxicity Value	--	1.00E-01	7.82E+03
Butylbenzene, tert-		1	No Toxicity Value	--	1.00E-01	7.82E+03	1	No Toxicity Value	--	1.00E-01	7.82E+03
Cadmium (Diet)		1	No Toxicity Value	--	1.00E-03	7.82E+01	1	No Toxicity Value	--	6.30E-06	5.26E+00
Carbon Tetrachloride		1	7.00E-02	9.93E+00	4.00E-03	3.13E+02	1	1.50E-01	4.63E+00	4.00E-03	3.13E+02
Chlordane		1	3.50E-01	1.99E+00	5.00E-04	3.91E+01	1	1.30E+00	5.35E-01	5.00E-04	3.91E+01
Chloro-2-methylaniline, 4-		1	1.00E-01	6.95E+00	3.00E-03	2.35E+02	1	2.70E-01	2.57E+00	3.00E-03	2.35E+02
Chloroacetaldehyde, 2-		1	2.70E-01	2.57E+00	No Toxicity Value	--	1	2.70E-01	2.57E+00	No Toxicity Value	--
Chlorobutane, 1-		1	No Toxicity Value	--	4.00E-02	3.13E+03	1	No Toxicity Value	--	4.00E-02	3.13E+03
Chlorotoluene, o-		1	No Toxicity Value	--	2.00E-02	1.56E+03	1	No Toxicity Value	--	2.00E-02	1.56E+03
Chlorotoluene, p-		1	No Toxicity Value	--	2.00E-02	1.56E+03	1	No Toxicity Value	--	2.00E-02	1.56E+03
Chromium(III), Insoluble Salts		1	No Toxicity Value	--	1.50E+00	1.17E+05	1	No Toxicity Value	--	1.50E+00	1.17E+05
Crotonaldehyde, trans-		1	1.90E+00	3.66E-01	1.00E-03	7.82E+01	1	1.90E+00	3.66E-01	1.00E-03	7.82E+01

Table A-3a. USEPA RSLs and DTSC-SLs for a Residential Receptor Exposed to Soil via Incidental Ingestion

Definition	Variable	USEPA Value	DTSC Value	Units
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	yrs
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	yrs
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	yrs
Age-dependent Adjustment Factor, 16-26	$ADAF_{16-26}$	1	1	yrs
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, adult	$AT_{nc,a}$	20	20	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
Body Weight, adult	BW_a	80	80	kg
Body Weight, child	BW_c	15	15	kg
Carcinogenic adjustment factor, ingestion	CAF_O	0.804	0.804	dimensionless
Conversion Factor	CF_o	1E-06	1E-06	kg/mg
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-26	ED_{16-26}	10	10	yrs
Exposure Duration, adult	ED_a	20	20	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Soil Ingestion Rate (adult)	IRS_a	100	100	mg/day
Soil Ingestion Rate (child)	IRS_c	200	200	mg/day
Mutagenic adjustment factor, ingestion	MAF_O	0.202	0.202	dimensionless
Relative Bioavailability	RBA	chemical-specific		dimensionless
Oral Reference Dose	RfD_O	chemical-specific		$(mg/kg\text{-}day)^{-1}$
(Regional) Screening Level, ingestion	$(R)SL_{Ing}$	derived herein		mg/kg
Oral Slope Factor	SF_O	chemical-specific		$(mg/kg\text{-}day)^{-1}$
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless

Equations

Carcinogens:

$$(R)SL_{ing}=\frac{TR\times(AT_c\times 365\ day/year)}{SF_o\times EF_r\times\left(\frac{ED_c\times IRS_c}{BW_c}+\frac{ED_a\times IRS_a}{BW_a}\right)\times CF_o\times RBA}$$

Mutagens:

$$(R)SL_{ing}=\frac{TR\times(AT_c\times 365\ days/year)}{SF_o\times EF_r\times\left(\frac{ED_{0-2}\times IRS_c\times ADAF_{0-2}}{BW_c}+\frac{ED_{2-6}\times IRS_c\times ADAF_{2-6}}{BW_c}+\frac{ED_{6-16}\times IRS_a\times ADAF_{6-16}}{BW_a}+\frac{ED_{16-26}\times IRS_a\times ADAF_{16-26}}{BW_a}\right)\times CF_o\times RBA}$$

Trichloroethene:

$$(R)SL_{ing}=\frac{TR\times(AT_c\times 365\ days/year)}{SF_o\times EF_r\times CF_o\times RBA\times\left\{\left(CAF_o\times\frac{ED_c\times IRS_c}{BW_c}+\frac{ED_a\times IRS_a}{BW_a}\right)+\left[MAF_o\times\left(\frac{ED_{0-2}\times IRS_c\times ADAF_{0-2}}{BW_c}+\frac{ED_{2-6}\times IRS_c\times ADAF_{2-6}}{BW_c}+\frac{ED_{6-16}\times IRS_a\times ADAF_{6-16}}{BW_a}+\frac{ED_{16-26}\times IRS_a\times ADAF_{16-26}}{BW_a}\right)\right]\right\}}$$

Vinyl Chloride:

$$(R)SL_{ing}=\frac{TR}{SF_o\times\left[\left(\frac{EF_r\times\left(\frac{ED_c\times IRS_c}{BW_c}+\frac{ED_a\times IRS_a}{BW_a}\right)\times CF_o}{AT_c\times 365\frac{days}{year}}\right)+\left(\frac{IRS_c\times CF_o}{BW_c}\right)\right]\times RBA}$$

Noncarcinogens:

$$(R)SL_{ing}=\frac{THQ\times\left(AT_{nc,c}\times 365\frac{day}{year}\right)\times BW_c}{EF_r\times ED_c\times\frac{1}{RfD_o}\times IRS_c\times CF_o\times RBA}$$

DTSC Cadmium - noncarcinogenic:

$$SL_{ing-adult,Cd}=\frac{THQ\times\left(AT_{nc,26-yr\ adult}\times 365\frac{day}{year}\right)\times BW_a}{EF_r\times ED_{26-yr\ adult}\times IRS_a\times\frac{1}{RfD_o}\times CF_o\times RBA}$$

		Residential USEPA RSL_{ing}					Residential DTSC-SL_{ing}				
		RBA	**SF_o**	**Cancer**	**RfD_o**	**Noncancer**	**RBA**	**SF_o**	**Cancer**	**RfD_o**	**Noncancer**
Analyte	**Mutagen?**	*(dimensionless)*	$(mg/kg\text{-}day)^{-1}$	(mg/kg)	(mg/kg-day)	(mg/kg)	*(dimensionless)*	$(mg/kg\text{-}day)^{-1}$	(mg/kg)	(mg/kg-day)	(mg/kg)
Cyanides											
~Cyanogen		1	No Toxicity Value	--	1.00E-03	7.82E+01	1	No Toxicity Value	--	1.00E-03	7.82E+01
~Cyanogen Bromide		1	No Toxicity Value	--	9.00E-02	7.04E+03	1	No Toxicity Value	--	9.00E-02	7.04E+03
~Cyanogen Chloride		1	No Toxicity Value	--	5.00E-02	3.91E+03	1	No Toxicity Value	--	5.00E-02	3.91E+03
~Potassium Silver Cyanide		1	No Toxicity Value	--	5.00E-03	3.91E+02	1	No Toxicity Value	--	5.00E-03	3.91E+02
~Silver Cyanide		1	No Toxicity Value	--	1.00E-01	7.82E+03	1	No Toxicity Value	--	1.00E-01	7.82E+03
Dibromobenzene, 1,3-		1	No Toxicity Value	--	4.00E-04	3.13E+01	1	No Toxicity Value	--	4.00E-04	3.13E+01
Dibromobenzene, 1,4-		1	No Toxicity Value	--	1.00E-02	7.82E+02	1	No Toxicity Value	--	1.00E-02	7.82E+02
Dibromochloromethane		1	8.40E-02	8.28E+00	2.00E-02	1.56E+03	1	8.40E-02	8.28E+00	2.00E-02	1.56E+03
Dibromoethane, 1,2-		1	2.00E+00	3.48E-01	9.00E-03	7.04E+02	1	3.60E+00	1.93E-01	9.00E-03	7.04E+02
Dichlorobenzidine, 3,3'-		1	4.50E-01	1.54E+00	No Toxicity Value	--	1	1.20E+00	5.79E-01	No Toxicity Value	--
Dichloroethane, 1,1-		1	5.70E-03	1.22E+02	2.00E-01	1.56E+04	1	5.70E-03	1.22E+02	2.00E-01	1.56E+04
Dichloroethylene, 1,2-cis-		1	No Toxicity Value	--	2.00E-03	1.56E+02	1	No Toxicity Value	--	2.00E-03	1.56E+02
Dichloroethylene, 1,2-trans-		1	No Toxicity Value	--	2.00E-02	1.56E+03	1	No Toxicity Value	--	2.00E-02	1.56E+03
Dichloropropane, 1,3-		1	No Toxicity Value	--	2.00E-02	1.56E+03	1	No Toxicity Value	--	2.00E-02	1.56E+03
Dichloropropene, 1,3-		1	1.00E-01	6.95E+00	3.00E-02	2.35E+03	1	9.10E-02	7.64E+00	3.00E-02	2.35E+03
Dimethylaniline, N,N-		1	No Toxicity Value	--	2.00E-03	1.56E+02	1	No Toxicity Value	--	2.00E-03	1.56E+02
Epichlorohydrin		1	9.90E-03	7.02E+01	6.00E-03	4.69E+02	1	8.00E-02	8.69E+00	6.00E-03	4.69E+02
Ethyl Chloride (Chloroethane)		1	No Toxicity Value	--	No Toxicity Value	--	1	4.70E-03	1.48E+02	No Toxicity Value	--
Ethyl Ether		1	No Toxicity Value	--	2.00E-01	1.56E+04	1	No Toxicity Value	--	2.00E-01	1.56E+04
Furans											
~Furan		1	No Toxicity Value	--	1.00E-03	7.82E+01	1	No Toxicity Value	--	1.00E-03	7.82E+01
Hexachlorobutadiene		1	7.80E-02	8.91E+00	1.00E-03	7.82E+01	1	7.80E-02	8.91E+00	1.00E-03	7.82E+01
Hexachlorocyclohexane, Technical		1	1.80E+00	3.86E-01	No Toxicity Value	--	1	4.00E+00	1.74E-01	No Toxicity Value	--
Isobutyl Alcohol		1	No Toxicity Value	--	3.00E-01	2.35E+04	1	No Toxicity Value	--	3.00E-01	2.35E+04
Lead Compounds											
~Lead subacetate		1	8.50E-03	8.18E+01	No Toxicity Value	--	1	3.80E-02	1.83E+01	No Toxicity Value	--
~Tetraethyl Lead		1	No Toxicity Value	--	1.00E-07	7.82E-03	1	No Toxicity Value	--	1.00E-07	7.82E-03
Lewisite		1	No Toxicity Value	--	5.00E-06	3.91E-01	1	No Toxicity Value	--	5.00E-06	3.91E-01

Table A-3a. USEPA RSLs and DTSC-SLs for a Residential Receptor Exposed to Soil via Incidental Ingestion

Definition	Variable	USEPA Value	DTSC Value	Units
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	yrs
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	yrs
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	yrs
Age-dependent Adjustment Factor, 16-26	$ADAF_{16-26}$	1	1	yrs
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, adult	$AT_{nc,a}$	20	20	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
Body Weight, adult	BW_a	80	80	kg
Body Weight, child	BW_c	15	15	kg
Carcinogenic adjustment factor, ingestion	CAF_O	0.804	0.804	dimensionless
Conversion Factor	CF_o	1E-06	1E-06	kg/mg
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-26	ED_{16-26}	10	10	yrs
Exposure Duration, adult	ED_a	20	20	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Soil Ingestion Rate (adult)	IRS_a	100	100	mg/day
Soil Ingestion Rate (child)	IRS_c	200	200	mg/day
Mutagenic adjustment factor, ingestion	MAF_O	0.202	0.202	dimensionless
Relative Bioavailability	RBA	chemical-specific		dimensionless
Oral Reference Dose	RfD_O	chemical-specific		$(mg/kg\text{-}day)^{-1}$
(Regional) Screening Level, ingestion	$(R)SL_{Ing}$	derived herein		mg/kg
Oral Slope Factor	SF_O	chemical-specific		$(mg/kg\text{-}day)^{-1}$
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless

Equations

Carcinogens:

$$(R)SL_{ing} = \frac{TR \times (AT_c \times 365\ day/year)}{SF_o \times EF_r \times \left(\frac{ED_c \times IRS_c}{BW_c} + \frac{ED_a \times IRS_a}{BW_a}\right) \times CF_o \times RBA}$$

Mutagens:

$$(R)SL_{ing} = \frac{TR \times (AT_c \times 365\ days/year)}{SF_o \times EF_r \times \left(\frac{ED_{0-2} \times IRS_c \times ADAF_{0-2}}{BW_c} + \frac{ED_{2-6} \times IRS_c \times ADAF_{2-6}}{BW_c} + \frac{ED_{6-16} \times IRS_a \times ADAF_{6-16}}{BW_a} + \frac{ED_{16-26} \times IRS_a \times ADAF_{16-26}}{BW_a}\right) \times CF_o \times RBA}$$

Trichloroethene:

$$(R)SL_{ing} = \frac{TR \times (AT_c \times 365\ days/year)}{SF_o \times EF_r \times CF_o \times RBA \times \left\{\left(CAF_o \times \frac{ED_c \times IRS_c}{BW_c} + \frac{ED_a \times IRS_a}{BW_a}\right) + \left[MAF_o \times \left(\frac{ED_{0-2} \times IRS_c \times ADAF_{0-2}}{BW_c} + \frac{ED_{2-6} \times IRS_c \times ADAF_{2-6}}{BW_c} + \frac{ED_{6-16} \times IRS_a \times ADAF_{6-16}}{BW_a} + \frac{ED_{16-26} \times IRS_a \times ADAF_{16-26}}{BW_a}\right)\right]\right\}}$$

Vinyl Chloride:

$$(R)SL_{ing} = \frac{TR}{SF_o \times \left[\left(\frac{EF_r \times \left(\frac{ED_c \times IRS_c}{BW_c} + \frac{ED_a \times IRS_a}{BW_a}\right) \times CF_o}{AT_c \times 365 \frac{days}{year}}\right) + \left(\frac{IRS_c \times CF_o}{BW_c}\right)\right] \times RBA}$$

Noncarcinogens:

$$(R)SL_{ing} = \frac{THQ \times \left(AT_{nc,c} \times 365 \frac{day}{year}\right) \times BW_c}{EF_r \times ED_c \times \frac{1}{RfD_o} \times IRS_c \times CF_o \times RBA}$$

DTSC Cadmium - noncarcinogenic:

$$SL_{ing-adult,Cd} = \frac{THQ \times \left(AT_{nc,26-yr\ adult} \times 365 \frac{day}{year}\right) \times BW_a}{EF_r \times ED_{26-yr\ adult} \times IRS_a \times \frac{1}{RfD_o} \times CF_o \times RBA}$$

		Residential USEPA RSL_{ing}					Residential DTSC-SL_{ing}				
Analyte	**Mutagen?**	**RBA** *(dimensionless)*	**SF_o** $(mg/kg\text{-}day)^{-1}$	**Cancer** (mg/kg)	**RfD_o** (mg/kg-day)	**Noncancer** (mg/kg)	**RBA** *(dimensionless)*	**SF_o** $(mg/kg\text{-}day)^{-1}$	**Cancer** (mg/kg)	**RfD_o** (mg/kg-day)	**Noncancer** (mg/kg)
Manganese (Non-diet)		1	No Toxicity Value	--	2.40E-02	1.88E+03	1	No Toxicity Value	--	2.40E-02	1.88E+03
Mercury Compounds											
~Mercuric Chloride (and other Mercury salt		1	No Toxicity Value	--	3.00E-04	2.35E+01	1	No Toxicity Value	--	1.60E-04	1.25E+01
~Mercury (elemental)		1	No Toxicity Value	--	not a soil COPC	--	1	No Toxicity Value	--	1.60E-04	1.25E+01
Methyl Acetate		1	No Toxicity Value	--	1.00E+00	7.82E+04	1	No Toxicity Value	--	1.00E+00	7.82E+04
Methylene Chloride	M	1	2.00E-03	7.66E+01	6.00E-03	4.69E+02	1	1.40E-02	1.09E+01	6.00E-03	4.69E+02
Methylene-bis(2-chloroaniline), 4,4'-	M	1	1.00E-01	1.53E+00	2.00E-03	1.56E+02	1	1.50E+00	1.02E-01	2.00E-03	1.56E+02
Methylstyrene, Alpha-		1	No Toxicity Value	--	7.00E-02	5.48E+03	1	No Toxicity Value	--	7.00E-02	5.48E+03
Mineral oils		1	No Toxicity Value	--	3.00E+00	2.35E+05	1	No Toxicity Value	--	3.00E+00	2.35E+05
Nickel Hydroxide		1	No Toxicity Value	--	1.10E-02	8.60E+02	1	No Toxicity Value	--	1.10E-02	8.60E+02
Nickel Oxide		1	No Toxicity Value	--	1.10E-02	8.60E+02	1	No Toxicity Value	--	1.10E-02	8.60E+02
Nickel Refinery Dust		1	No Toxicity Value	--	1.10E-02	8.60E+02	1	9.10E-01	7.64E-01	1.10E-02	8.60E+02
Nickel Soluble Salts		1	No Toxicity Value	--	2.00E-02	1.56E+03	1	No Toxicity Value	--	1.10E-02	8.60E+02
Nickel Subsulfide		1	1.70E+00	4.09E-01	1.10E-02	8.60E+02	1	1.70E+00	4.09E-01	1.10E-02	8.60E+02
Pentachloroethane		1	9.00E-02	7.72E+00	No Toxicity Value	--	1	9.00E-02	7.72E+00	No Toxicity Value	--
Phosphorus, White		1	No Toxicity Value	--	2.00E-05	1.56E+00	1	No Toxicity Value	--	2.00E-05	1.56E+00
Phthalates											
~Dimethylterephthalate		1	No Toxicity Value	--	1.00E-01	7.82E+03	1	No Toxicity Value	--	1.00E-01	7.82E+03
Silver		1	No Toxicity Value	--	5.00E-03	3.91E+02	1	No Toxicity Value	--	5.00E-03	3.91E+02
Tetrachloroethane, 1,1,1,2-		1	2.60E-02	2.67E+01	3.00E-02	2.35E+03	1	2.60E-02	2.67E+01	3.00E-02	2.35E+03
Tetrachloroethane, 1,1,2,2-		1	2.00E-01	3.48E+00	2.00E-02	1.56E+03	1	2.70E-01	2.57E+00	2.00E-02	1.56E+03
Tetrachloroethylene		1	2.10E-03	3.31E+02	6.00E-03	4.69E+02	1	5.40E-01	1.29E+00	6.00E-03	4.69E+02
Toluene		1	No Toxicity Value	--	8.00E-02	6.26E+03	1	No Toxicity Value	--	8.00E-02	6.26E+03
Tri-n-butyltin		1	No Toxicity Value	--	3.00E-04	2.35E+01	1	No Toxicity Value	--	3.00E-04	2.35E+01
Trichlorobenzene, 1,2,3-		1	No Toxicity Value	--	8.00E-04	6.26E+01	1	No Toxicity Value	--	8.00E-04	6.26E+01
Trichloroethane, 1,1,1-		1	No Toxicity Value	--	2.00E+00	1.56E+05	1	No Toxicity Value	--	2.00E+00	1.56E+05
Trichlorofluoromethane		1	No Toxicity Value	--	3.00E-01	2.35E+04	1	No Toxicity Value	--	3.00E-01	2.35E+04
Trichlorophenol, 2,4,6-		1	1.10E-02	6.32E+01	1.00E-03	7.82E+01	1	7.00E-02	9.93E+00	1.00E-03	7.82E+01
Trichloropropane, 1,1,2-		1	No Toxicity Value	--	5.00E-03	3.91E+02	1	No Toxicity Value	--	5.00E-03	3.91E+02

Table A-3a. USEPA RSLs and DTSC-SLs for a Residential Receptor Exposed to Soil via Incidental Ingestion

Definition	Variable	USEPA Value	DTSC Value	Units
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	yrs
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	yrs
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	yrs
Age-dependent Adjustment Factor, 16-26	$ADAF_{16-26}$	1	1	yrs
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, adult	$AT_{nc,a}$	20	20	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
Body Weight, adult	BW_a	80	80	kg
Body Weight, child	BW_c	15	15	kg
Carcinogenic adjustment factor, ingestion	CAF_O	0.804	0.804	dimensionless
Conversion Factor	CF_o	1E-06	1E-06	kg/mg
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-26	ED_{16-26}	10	10	yrs
Exposure Duration, adult	ED_a	20	20	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Soil Ingestion Rate (adult)	IRS_a	100	100	mg/day
Soil Ingestion Rate (child)	IRS_c	200	200	mg/day
Mutagenic adjustment factor, ingestion	MAF_O	0.202	0.202	dimensionless
Relative Bioavailability	RBA	chemical-specific		dimensionless
Oral Reference Dose	RfD_O	chemical-specific		$(mg/kg\text{-}day)^{-1}$
(Regional) Screening Level, ingestion	$(R)SL_{Ing}$	derived herein		mg/kg
Oral Slope Factor	SF_O	chemical-specific		$(mg/kg\text{-}day)^{-1}$
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless

Equations

Carcinogens:

$$(R)SL_{ing}=\frac{TR\times(AT_c\times 365\ day/year)}{SF_o\times EF_r\times\left(\frac{ED_c\times IRS_c}{BW_c}+\frac{ED_a\times IRS_a}{BW_a}\right)\times CF_o\times RBA}$$

Mutagens:

$$(R)SL_{ing}=\frac{TR\times(AT_c\times 365\ days/year)}{SF_o\times EF_r\times\left(\frac{ED_{0-2}\times IRS_c\times ADAF_{0-2}}{BW_c}+\frac{ED_{2-6}\times IRS_c\times ADAF_{2-6}}{BW_c}+\frac{ED_{6-16}\times IRS_a\times ADAF_{6-16}}{BW_a}+\frac{ED_{16-26}\times IRS_a\times ADAF_{16-26}}{BW_a}\right)\times CF_o\times RBA}$$

Trichloroethene:

$$(R)SL_{ing}=\frac{TR\times(AT_c\times 365\ days/year)}{SF_o\times EF_r\times CF_o\times RBA\times\left\{\left(CAF_o\times\frac{ED_c\times IRS_c}{BW_c}+\frac{ED_a\times IRS_a}{BW_a}\right)+\left[MAF_o\times\left(\frac{ED_{0-2}\times IRS_c\times ADAF_{0-2}}{BW_c}+\frac{ED_{2-6}\times IRS_c\times ADAF_{2-6}}{BW_c}+\frac{ED_{6-16}\times IRS_a\times ADAF_{6-16}}{BW_a}+\frac{ED_{16-26}\times IRS_a\times ADAF_{16-26}}{BW_a}\right)\right]\right\}}$$

Vinyl Chloride:

$$(R)SL_{ing}=\frac{TR}{SF_o\times\left[\left(\frac{EF_r\times\left(\frac{ED_c\times IRS_c}{BW_c}+\frac{ED_a\times IRS_a}{BW_a}\right)\times CF_o}{AT_c\times 365\frac{days}{year}}\right)+\left(\frac{IRS_c\times CF_o}{BW_c}\right)\right]\times RBA}$$

Noncarcinogens:

$$(R)SL_{ing}=\frac{THQ\times\left(AT_{nc,c}\times 365\frac{day}{year}\right)\times BW_c}{EF_r\times ED_c\times\frac{1}{RfD_o}\times IRS_c\times CF_o\times RBA}$$

DTSC Cadmium - noncarcinogenic:

$$SL_{ing-adult,Cd}=\frac{THQ\times\left(AT_{nc,26-yr\ adult}\times 365\frac{day}{year}\right)\times BW_a}{EF_r\times ED_{26-yr\ adult}\times IRS_a\times\frac{1}{RfD_o}\times CF_o\times RBA}$$

		Residential USEPA RSL_{ing}					Residential DTSC-SL_{ing}				
Analyte	**Mutagen?**	**RBA** *(dimensionless)*	**SF_o** $(mg/kg\text{-}day)^{-1}$	**Cancer** (mg/kg)	**RfD_o** (mg/kg-day)	**Noncancer** (mg/kg)	**RBA** *(dimensionless)*	**SF_o** $(mg/kg\text{-}day)^{-1}$	**Cancer** (mg/kg)	**RfD_o** (mg/kg-day)	**Noncancer** (mg/kg)
Trichloropropane, 1,2,3-	M	1	3.00E+01	5.10E-03	4.00E-03	3.13E+02	1	3.00E+01	5.10E-03	4.00E-03	3.13E+02
Trimethylbenzene, 1,3,5-		1	No Toxicity Value	--	1.00E-02	7.82E+02	1	No Toxicity Value	--	1.00E-02	7.82E+02
Trimethylpentene, 2,4,4-		1	No Toxicity Value	--	1.00E-02	7.82E+02	1	No Toxicity Value	--	1.00E-02	7.82E+02
Vanadium and Compounds		1	No Toxicity Value	--	5.04E-03	3.94E+02	1	No Toxicity Value	--	5.04E-03	3.94E+02
Vinyl Chloride	M (VC)	1	7.20E-01	9.40E-02	3.00E-03	2.35E+02	1	2.70E-01	2.51E-01	3.00E-03	2.35E+02
Additional Analytes											
Beryllium Sulfate		1	No Toxicity Value	--	2.00E-03	1.56E+02	1	No Toxicity Value	--	2.00E-04	1.56E+01
Dichlorobenzene, 1,3-		1	No Toxicity Value	--	No Toxicity Value	--	1	No Toxicity Value	--	3.00E-02	2.35E+03
Methylcyclohexane		1	No Toxicity Value	--	No Toxicity Value	--	1	No Toxicity Value	--	No Toxicity Value	--

"--" = no value

Table A-3b. USEPA RSLs and DTSC-SLs for a Commercial/Industrial Receptor Exposed to Soil via Incidental Ingestion

Definition	Variable	USEPA Value	DTSC Value	
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, worker	$AT_{nc,w}$	25	25	yrs
Body Weight, adult	BW_a	80	80	kg
Conversion Factor	CF_o	1E-06	1E-06	kg/mg
COPC Concentration in Soil	C_{soil}	chemical-specific		mg/kg
Exposure Duration, worker	ED_w	25	25	yrs
Exposure Frequency, worker	EF_w	250	250	days/yr
Fraction Contaminated Soil Ingested, worker	FI_w	1.0	1.0	dimensionless
Soil Ingestion Rate, worker	IRS_w	100	100	mg/day
Relative Bioavailability	RBA	chemical-specific		dimensionless
Oral Reference Dose	RfD_O	chemical-specific		mg/kg-day
(Regional) Screening Level, ingestion	$(R)SL_{ing}$	derived herein		mg/kg
Oral Slope Factor	SF_O	chemical-specific		$(mg/kg\text{-}day)^{-1}$
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless

Equations

Carcinogens:

$$(R)SL_{ing} = \frac{TR \times AT_c \times 365\frac{days}{year} \times BW_a}{EF_w \times ED_w \times SF_O \times IRS_w \times CF_o \times RBA}$$

Noncarcinogens:

$$(R)SL_{ing} = \frac{THQ \times AT_{nc,w} \times 365\frac{days}{year} \times BW_a}{EF_w \times ED_w \times \frac{1}{RfD_O} \times IRS_w \times CF_o \times RBA}$$

	Commercial/Industrial USEPA RSL_{ing}					Commercial/Industrial DTSC-SL_{ing}				
Analyte	**RBA** *(dimensionless)*	**SF_o** $(mg/kg\text{-}day)^{-1}$	**Cancer** (mg/kg)	**RfD_o** (mg/kg-day)	**Noncancer** (mg/kg)	**RBA** *(dimensionless)*	**SF_o** $(mg/kg\text{-}day)^{-1}$	**Cancer** (mg/kg)	**RfD_o** (mg/kg-day)	**Noncancer** (mg/kg)
USEPA RSL Analytes										
Acrylamide	1	5.00E-01	6.54E+00	2.00E-03	2.34E+03	1	4.50E+00	7.27E-01	2.00E-03	2.34E+03
Acrylonitrile	1	5.40E-01	6.06E+00	4.00E-02	4.67E+04	1	1.00E+00	3.27E+00	4.00E-02	4.67E+04
Arsenic, Inorganic	0.6	1.50E+00	3.63E+00	3.00E-04	5.84E+02	1	9.50E+00	3.44E-01	3.50E-06	4.09E+00
Benzaldehyde	1	No Toxicity Value	--	1.00E-01	1.17E+05	1	No Toxicity Value	--	1.00E-01	1.17E+05
Benzene	1	5.50E-02	5.95E+01	4.00E-03	4.67E+03	1	1.00E-01	3.27E+01	4.00E-03	4.67E+03
Benzenethiol	1	No Toxicity Value	--	1.00E-03	1.17E+03	1	No Toxicity Value	--	1.00E-03	1.17E+03
Benzidine	1	2.30E+02	1.42E-02	3.00E-03	3.50E+03	1	5.00E+02	6.54E-03	3.00E-03	3.50E+03
Beryllium and compounds	1	No Toxicity Value	--	2.00E-03	2.34E+03	1	No Toxicity Value	--	2.00E-04	2.34E+02
Bromodichloromethane	1	6.20E-02	5.27E+01	2.00E-02	2.34E+04	1	1.30E-01	2.52E+01	2.00E-02	2.34E+04
Bromoform	1	7.90E-03	4.14E+02	2.00E-02	2.34E+04	1	1.10E-02	2.97E+02	2.00E-02	2.34E+04
Butadiene, 1,3-	1	3.40E+00	9.62E-01	No Toxicity Value	--	1	6.00E-01	5.45E+00	No Toxicity Value	--
Butanol, N-	1	No Toxicity Value	--	1.00E-01	1.17E+05	1	No Toxicity Value	--	1.00E-01	1.17E+05
Butylbenzene, n-	1	No Toxicity Value	--	5.00E-02	5.84E+04	1	No Toxicity Value	--	5.00E-02	5.84E+04
Butylbenzene, sec-	1	No Toxicity Value	--	1.00E-01	1.17E+05	1	No Toxicity Value	--	1.00E-01	1.17E+05
Butylbenzene, tert-	1	No Toxicity Value	--	1.00E-01	1.17E+05	1	No Toxicity Value	--	1.00E-01	1.17E+05
Cadmium (Diet)	1	No Toxicity Value	--	1.00E-03	1.17E+03	1	No Toxicity Value	--	6.30E-06	7.36E+00
Carbon Tetrachloride	1	7.00E-02	4.67E+01	4.00E-03	4.67E+03	1	1.50E-01	2.18E+01	4.00E-03	4.67E+03
Chlordane	1	3.50E-01	9.34E+00	5.00E-04	5.84E+02	1	1.30E+00	2.52E+00	5.00E-04	5.84E+02
Chloro-2-methylaniline, 4-	1	1.00E-01	3.27E+01	3.00E-03	3.50E+03	1	2.70E-01	1.21E+01	3.00E-03	3.50E+03
Chloroacetaldehyde, 2-	1	2.70E-01	1.21E+01	No Toxicity Value	--	1	2.70E-01	1.21E+01	No Toxicity Value	--
Chlorobutane, 1-	1	No Toxicity Value	--	4.00E-02	4.67E+04	1	No Toxicity Value	--	4.00E-02	4.67E+04
Chlorotoluene, o-	1	No Toxicity Value	--	2.00E-02	2.34E+04	1	No Toxicity Value	--	2.00E-02	2.34E+04
Chlorotoluene, p-	1	No Toxicity Value	--	2.00E-02	2.34E+04	1	No Toxicity Value	--	2.00E-02	2.34E+04
Chromium(III), Insoluble Salts	1	No Toxicity Value	--	1.50E+00	1.75E+06	1	No Toxicity Value	--	1.50E+00	1.75E+06
Crotonaldehyde, trans-	1	1.90E+00	1.72E+00	1.00E-03	1.17E+03	1	1.90E+00	1.72E+00	1.00E-03	1.17E+03
Cyanides										
~Cyanogen	1	No Toxicity Value	--	1.00E-03	1.17E+03	1	No Toxicity Value	--	1.00E-03	1.17E+03
~Cyanogen Bromide	1	No Toxicity Value	--	9.00E-02	1.05E+05	1	No Toxicity Value	--	9.00E-02	1.05E+05
~Cyanogen Chloride	1	No Toxicity Value	--	5.00E-02	5.84E+04	1	No Toxicity Value	--	5.00E-02	5.84E+04
~Potassium Silver Cyanide	1	No Toxicity Value	--	5.00E-03	5.84E+03	1	No Toxicity Value	--	5.00E-03	5.84E+03
~Silver Cyanide	1	No Toxicity Value	--	1.00E-01	1.17E+05	1	No Toxicity Value	--	1.00E-01	1.17E+05

Table A-3b. USEPA RSLs and DTSC-SLs for a Commercial/Industrial Receptor Exposed to Soil via Incidental Ingestion

Definition	Variable	USEPA Value	DTSC Value	
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, worker	$AT_{nc,w}$	25	25	yrs
Body Weight, adult	BW_a	80	80	kg
Conversion Factor	CF_o	1E-06	1E-06	kg/mg
COPC Concentration in Soil	C_{soil}	chemical-specific		mg/kg
Exposure Duration, worker	ED_w	25	25	yrs
Exposure Frequency, worker	EF_w	250	250	days/yr
Fraction Contaminated Soil Ingested, worker	FI_w	1.0	1.0	dimensionless
Soil Ingestion Rate, worker	IRS_w	100	100	mg/day
Relative Bioavailability	RBA	chemical-specific		dimensionless
Oral Reference Dose	RfD_O	chemical-specific		mg/kg-day
(Regional) Screening Level, ingestion	$(R)SL_{ing}$	derived herein		mg/kg
Oral Slope Factor	SF_O	chemical-specific		$(mg/kg\text{-}day)^{-1}$
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless

Equations

Carcinogens:

$$(R)SL_{ing} = \frac{TR \times AT_c \times 365\frac{days}{year} \times BW_a}{EF_w \times ED_w \times SF_O \times IRS_w \times CF_o \times RBA}$$

Noncarcinogens:

$$(R)SL_{ing} = \frac{THQ \times AT_{nc,w} \times 365\frac{days}{year} \times BW_a}{EF_w \times ED_w \times \frac{1}{RfD_O} \times IRS_w \times CF_o \times RBA}$$

	Commercial/Industrial USEPA RSL_{ing}					Commercial/Industrial DTSC-SL_{ing}				
Analyte	**RBA** *(dimensionless)*	**SF_o** $(mg/kg\text{-}day)^{-1}$	**Cancer** (mg/kg)	**RfD_o** (mg/kg-day)	**Noncancer** (mg/kg)	**RBA** *(dimensionless)*	**SF_o** $(mg/kg\text{-}day)^{-1}$	**Cancer** (mg/kg)	**RfD_o** (mg/kg-day)	**Noncancer** (mg/kg)
Dibromobenzene, 1,3-	1	No Toxicity Value	--	4.00E-04	4.67E+02	1	No Toxicity Value	--	4.00E-04	4.67E+02
Dibromobenzene, 1,4-	1	No Toxicity Value	--	1.00E-02	1.17E+04	1	No Toxicity Value	--	1.00E-02	1.17E+04
Dibromochloromethane	1	8.40E-02	3.89E+01	2.00E-02	2.34E+04	1	8.40E-02	3.89E+01	2.00E-02	2.34E+04
Dibromoethane, 1,2-	1	2.00E+00	1.64E+00	9.00E-03	1.05E+04	1	3.60E+00	9.08E-01	9.00E-03	1.05E+04
Dichlorobenzidine, 3,3'-	1	4.50E-01	7.27E+00	No Toxicity Value	--	1	1.20E+00	2.73E+00	No Toxicity Value	--
Dichloroethane, 1,1-	1	5.70E-03	5.74E+02	2.00E-01	2.34E+05	1	5.70E-03	5.74E+02	2.00E-01	2.34E+05
Dichloroethylene, 1,2-cis-	1	No Toxicity Value	--	2.00E-03	2.34E+03	1	No Toxicity Value	--	2.00E-03	2.34E+03
Dichloroethylene, 1,2-trans-	1	No Toxicity Value	--	2.00E-02	2.34E+04	1	No Toxicity Value	--	2.00E-02	2.34E+04
Dichloropropane, 1,3-	1	No Toxicity Value	--	2.00E-02	2.34E+04	1	No Toxicity Value	--	2.00E-02	2.34E+04
Dichloropropene, 1,3-	1	1.00E-01	3.27E+01	3.00E-02	3.50E+04	1	9.10E-02	3.59E+01	3.00E-02	3.50E+04
Dimethylaniline, N,N-	1	No Toxicity Value	--	2.00E-03	2.34E+03	1	No Toxicity Value	--	2.00E-03	2.34E+03
Epichlorohydrin	1	9.90E-03	3.30E+02	6.00E-03	7.01E+03	1	8.00E-02	4.09E+01	6.00E-03	7.01E+03
Ethyl Chloride (Chloroethane)	1	No Toxicity Value	--	No Toxicity Value	--	1	4.70E-03	6.96E+02	No Toxicity Value	--
Ethyl Ether	1	No Toxicity Value	--	2.00E-01	2.34E+05	1	No Toxicity Value	--	2.00E-01	2.34E+05
Furans										
~Furan	1	No Toxicity Value	--	1.00E-03	1.17E+03	1	No Toxicity Value	--	1.00E-03	1.17E+03
Hexachlorobutadiene	1	7.80E-02	4.19E+01	1.00E-03	1.17E+03	1	7.80E-02	4.19E+01	1.00E-03	1.17E+03
Hexachlorocyclohexane, Technical	1	1.80E+00	1.82E+00	No Toxicity Value	--	1	4.00E+00	8.18E-01	No Toxicity Value	--
Isobutyl Alcohol	1	No Toxicity Value	--	3.00E-01	3.50E+05	1	No Toxicity Value	--	3.00E-01	3.50E+05
Lead Compounds										
~Lead subacetate	1	8.50E-03	3.85E+02	No Toxicity Value	--	1	3.80E-02	8.61E+01	No Toxicity Value	--
~Tetraethyl Lead	1	No Toxicity Value	--	1.00E-07	1.17E-01	1	No Toxicity Value	--	1.00E-07	1.17E-01
Lewisite	1	No Toxicity Value	--	5.00E-06	5.84E+00	1	No Toxicity Value	--	5.00E-06	5.84E+00
Manganese (Non-diet)	1	No Toxicity Value	--	2.40E-02	2.80E+04	1	No Toxicity Value	--	2.40E-02	2.80E+04
Mercury Compounds										
~Mercuric Chloride (and other Mercury salts)	1	No Toxicity Value	--	3.00E-04	3.50E+02	1	No Toxicity Value	--	1.60E-04	1.87E+02
~Mercury (elemental)	1	No Toxicity Value	--	not a soil COPC	--	1	No Toxicity Value	--	1.60E-04	1.87E+02
Methyl Acetate	1	No Toxicity Value	--	1.00E+00	1.17E+06	1	No Toxicity Value	--	1.00E+00	1.17E+06
Methylene Chloride	1	2.00E-03	1.64E+03	6.00E-03	7.01E+03	1	1.40E-02	2.34E+02	6.00E-03	7.01E+03
Methylene-bis(2-chloroaniline), 4,4'-	1	1.00E-01	3.27E+01	2.00E-03	2.34E+03	1	1.50E+00	2.18E+00	2.00E-03	2.34E+03
Methylstyrene, Alpha-	1	No Toxicity Value	--	7.00E-02	8.18E+04	1	No Toxicity Value	--	7.00E-02	8.18E+04
Mineral oils	1	No Toxicity Value	--	3.00E+00	3.50E+06	1	No Toxicity Value	--	3.00E+00	3.50E+06

Table A-3b. USEPA RSLs and DTSC-SLs for a Commercial/Industrial Receptor Exposed to Soil via Incidental Ingestion

Definition	Variable	USEPA Value	DTSC Value	
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, worker	$AT_{nc,w}$	25	25	yrs
Body Weight, adult	BW_a	80	80	kg
Conversion Factor	CF_o	1E-06	1E-06	kg/mg
COPC Concentration in Soil	C_{soil}	chemical-specific		mg/kg
Exposure Duration, worker	ED_w	25	25	yrs
Exposure Frequency, worker	EF_w	250	250	days/yr
Fraction Contaminated Soil Ingested, worker	FI_w	1.0	1.0	dimensionless
Soil Ingestion Rate, worker	IRS_w	100	100	mg/day
Relative Bioavailability	RBA	chemical-specific		dimensionless
Oral Reference Dose	RfD_O	chemical-specific		mg/kg-day
(Regional) Screening Level, ingestion	$(R)SL_{ing}$	derived herein		mg/kg
Oral Slope Factor	SF_O	chemical-specific		$(mg/kg\text{-}day)^{-1}$
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless

Equations

Carcinogens:

$$(R)SL_{ing} = \frac{TR \times AT_c \times 365\frac{days}{year} \times BW_a}{EF_w \times ED_w \times SF_O \times IRS_w \times CF_o \times RBA}$$

Noncarcinogens:

$$(R)SL_{ing} = \frac{THQ \times AT_{nc,w} \times 365\frac{days}{year} \times BW_a}{EF_w \times ED_w \times \frac{1}{RfD_O} \times IRS_w \times CF_o \times RBA}$$

	Commercial/Industrial USEPA RSL_{ing}					Commercial/Industrial DTSC-SL_{ing}				
Analyte	**RBA** *(dimensionless)*	**SF_o** $(mg/kg\text{-}day)^{-1}$	**Cancer** (mg/kg)	**RfD_o** (mg/kg-day)	**Noncancer** (mg/kg)	**RBA** *(dimensionless)*	**SF_o** $(mg/kg\text{-}day)^{-1}$	**Cancer** (mg/kg)	**RfD_o** (mg/kg-day)	**Noncancer** (mg/kg)
Nickel Hydroxide	1	No Toxicity Value	--	1.10E-02	1.28E+04	1	No Toxicity Value	--	1.10E-02	1.28E+04
Nickel Oxide	1	No Toxicity Value	--	1.10E-02	1.28E+04	1	No Toxicity Value	--	1.10E-02	1.28E+04
Nickel Refinery Dust	1	No Toxicity Value	--	1.10E-02	1.28E+04	1	9.10E-01	3.59E+00	1.10E-02	1.28E+04
Nickel Soluble Salts	1	No Toxicity Value	--	2.00E-02	2.34E+04	1	No Toxicity Value	--	1.10E-02	1.28E+04
Nickel Subsulfide	1	1.70E+00	1.92E+00	1.10E-02	1.28E+04	1	1.70E+00	1.92E+00	1.10E-02	1.28E+04
Pentachloroethane	1	9.00E-02	3.63E+01	No Toxicity Value	--	1	9.00E-02	3.63E+01	No Toxicity Value	--
Phosphorus, White	1	No Toxicity Value	--	2.00E-05	2.34E+01	1	No Toxicity Value	--	2.00E-05	2.34E+01
Phthalates										
~Dimethylterephthalate	1	No Toxicity Value	--	1.00E-01	1.17E+05	1	No Toxicity Value	--	1.00E-01	1.17E+05
Silver	1	No Toxicity Value	--	5.00E-03	5.84E+03	1	No Toxicity Value	--	5.00E-03	5.84E+03
Tetrachloroethane, 1,1,1,2-	1	2.60E-02	1.26E+02	3.00E-02	3.50E+04	1	2.60E-02	1.26E+02	3.00E-02	3.50E+04
Tetrachloroethane, 1,1,2,2-	1	2.00E-01	1.64E+01	2.00E-02	2.34E+04	1	2.70E-01	1.21E+01	2.00E-02	2.34E+04
Tetrachloroethylene	1	2.10E-03	1.56E+03	6.00E-03	7.01E+03	1	5.40E-01	6.06E+00	6.00E-03	7.01E+03
Toluene	1	No Toxicity Value	--	8.00E-02	9.34E+04	1	No Toxicity Value	--	8.00E-02	9.34E+04
Tri-n-butyltin	1	No Toxicity Value	--	3.00E-04	3.50E+02	1	No Toxicity Value	--	3.00E-04	3.50E+02
Trichlorobenzene, 1,2,3-	1	No Toxicity Value	--	8.00E-04	9.34E+02	1	No Toxicity Value	--	8.00E-04	9.34E+02
Trichloroethane, 1,1,1-	1	No Toxicity Value	--	2.00E+00	2.34E+06	1	No Toxicity Value	--	2.00E+00	2.34E+06
Trichlorofluoromethane	1	No Toxicity Value	--	3.00E-01	3.50E+05	1	No Toxicity Value	--	3.00E-01	3.50E+05
Trichlorophenol, 2,4,6-	1	1.10E-02	2.97E+02	1.00E-03	1.17E+03	1	7.00E-02	4.67E+01	1.00E-03	1.17E+03
Trichloropropane, 1,1,2-	1	No Toxicity Value	--	5.00E-03	5.84E+03	1	No Toxicity Value	--	5.00E-03	5.84E+03
Trichloropropane, 1,2,3-	1	3.00E+01	1.09E-01	4.00E-03	4.67E+03	1	3.00E+01	1.09E-01	4.00E-03	4.67E+03
Trimethylbenzene, 1,3,5-	1	No Toxicity Value	--	1.00E-02	1.17E+04	1	No Toxicity Value	--	1.00E-02	1.17E+04
Trimethylpentene, 2,4,4-	1	No Toxicity Value	--	1.00E-02	1.17E+04	1	No Toxicity Value	--	1.00E-02	1.17E+04
Vanadium and Compounds	1	No Toxicity Value	--	5.04E-03	5.89E+03	1	No Toxicity Value	--	5.04E-03	5.89E+03
Vinyl Chloride	1	7.20E-01	4.54E+00	3.00E-03	3.50E+03	1	2.70E-01	1.21E+01	3.00E-03	3.50E+03
Additional Analytes										
Beryllium Sulfate	1	No Toxicity Value	--	2.00E-03	2.34E+03	1	No Toxicity Value	--	2.00E-04	2.34E+02
Dichlorobenzene, 1,3-	1	No Toxicity Value	--	No Toxicity Value	--	1	No Toxicity Value	--	3.00E-02	3.50E+04
Methylcyclohexane	1	No Toxicity Value	--	No Toxicity Value	--	1	No Toxicity Value	--	No Toxicity Value	--

"--" = no value

Table A-4a. USEPA RSLs and DTSC-SLs for a Residential Receptor Exposed to Soil via Dermal Contact

Description	Variable	USEPA Value	DTSC Value	Units
Dermal Soil Absorption Factor[a]	ABS_d[a]	chemical-specific		unitless
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	yrs
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	yrs
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	yrs
Age-dependent Adjustment Factor, 16-26	$ADAF_{16-26}$	1	1	yrs
Soil-to-Skin Adherence Factor, adult	AF_a	0.07	0.07	mg/cm^2-day
Soil-to-Skin Adherence Factor, child	AF_c	0.2	0.2	mg/cm^2-day
Averaging Time, Carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, adult	$AT_{nc,a}$	20	20	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
Body Weight, adult	BW_a	80	80	kg
Body Weight, child	BW_c	15	15	kg
Carcinogenic adjustment factor	CAF_O	0.804	0.804	dimensionless
Conversion Factor	CF_d	1E-06	1E-06	kg/mg
Fraction of EV in Contact with Soil, resident	EC_r	1	1	unitless
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-26	ED_{16-26}	10	10	yrs
Exposure Duration, adult	ED_a	20	20	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Event Frequency, resident	EV_r	1	1	events/day
Mutagenic adjustment factor	MAF_O	0.202	0.202	dimensionless
Refererenc Dose Adjusted for GI Absorption	RfD_d	chemical-specific		mg/kg-day
(Regional) Screening Level, dermal	$(R)SL_D$	derived herein		mg/kg
Exposed Body Surface Area, adult	SA_a	6032	6032	cm^2
Exposed Body Surface Area, child	SA_c	2373	2900	cm^2
Oral Slope Factor Adjusted for GI Absorption	SF_d	chemical-specific		(mg/kg-day)$^{-1}$
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless

Equations:

Carcinogens:

$$(R)SL_D = \frac{TR \times (AT_c \times 365\ day/year)}{SF_d \times EF_r \times EV_r \times EC_r \times \left(\frac{ED_c \times SA_c \times AF_c}{BW_c} + \frac{ED_a \times SA_a \times AF_a}{BW_a}\right) \times ABS_d \times CF_d}$$

Mutagens:

$$(R)SL_D = \frac{TR \times (AT_c \times 365\ days/year)}{SF_d \times EF_r \times EV_r \times EC_r \times \left(\frac{\frac{ED_{0-2} \times AF_c \times SA_c \times ADAF_{0-2}}{BW_c} + \frac{ED_{2-6} \times AF_c \times SA_c \times ADAF_{2-6}}{BW_c} + \frac{ED_{6-16} \times AF_a \times SA_a \times ADAF_{6-16}}{BW_a} + \frac{ED_{16-26} \times AF_a \times SA_a \times ADAF_{16-26}}{BW_a}}{}\right) \times ABS_d \times CF_d}$$

Trichloroethene:

$$(R)SL_D = \frac{TR \times (AT_c \times 365\ days/year)}{SF_d \times EV_r \times EC_r \times ABS_d \times CF_d \times \left\{\left[CAF_O \times \left(\frac{ED_c \times EF_r \times SA_c \times AF_c}{BW_c} + \frac{ED_a \times EF_r \times SA_a \times AF_a}{BW_a}\right)\right] + \left[MAF_O \times \left(\frac{\frac{ED_{0-2} \times EF_r \times AF_c \times SA_c \times ADAF_{0-2}}{BW_c} + \frac{ED_{2-6} \times EF_r \times AF_c \times SA_c \times ADAF_{2-6}}{BW_c} + \frac{ED_{6-16} \times EF_r \times AF_a \times SA_a \times ADAF_{6-16}}{BW_a} + \frac{ED_{16-26} \times EF_r \times AF_a \times SA_a \times ADAF_{16-26}}{BW_a}}{}\right)\right]\right\}}$$

Vinyl Chloride:

$$(R)SL_D = \frac{TR}{SF_d \times EV_r \times EC_r \times \left[\left(\frac{EF_r \times \left(\frac{ED_c \times SA_c \times AF_c}{BW_c} + \frac{ED_a \times SA_a \times AF_a}{BW_a}\right) \times ABS_d \times CF_d}{AT_c \times 365\frac{days}{year}}\right) + \left(\frac{SA_c \times AF_c \times ABS_d \times CF_d}{BW_c}\right)\right]}$$

Noncarcinogens:

$$(R)SL_D = \frac{THQ \times \left(AT_{nc,c} \times 365\frac{day}{year}\right) \times BW_c}{EF_r \times ED_c \times \frac{1}{RfD_d} \times EV_r \times EC_r \times SA_c \times AF_c \times ABS_d \times CF_d}$$

DTSC Cadmium - noncarcinogenic:

$$SL_{D-adult,Cd} = \frac{THQ \times \left(AT_{nc,26-yr\ adult} \times 365\frac{day}{year}\right) \times BW_a}{EF_r \times ED_{26-yr\ adult} \times \frac{1}{RfD_d} \times EV_r \times EC_r \times SA_a \times AF_a \times ABS_d \times CF_d}$$

		Residential USEPA RSL$_D$						Residential DTSC-SL$_D$					
Analyte	**Mutagen?**	**ABS_d[a]** (unitless)	**GI Absorption** (unitless)	**SF_d** (mg/kg-day)$^{-1}$	**Cancer** (mg/kg)	**RfD_d** (mg/kg-day)	**Noncancer** (mg/kg)	**ABS_d[a]** (unitless)	**GI Absorption** (unitless)	**SF_d** (mg/kg-day)$^{-1}$	**Cancer** (mg/kg)	**RfD_d** (mg/kg-day)	**Noncancer** (mg/kg)
USEPA RSL Analytes													
Acrylamide	M	1.00E-01	1.00E+00	5.00E-01	1.19E+00	2.00E-03	6.59E+02	1.00E-01	1.00E+00	4.50E+00	1.12E-01	2.00E-03	5.39E+02
Acrylonitrile		--	1.00E+00	5.40E-01	--	4.00E-02	--	--	1.00E+00	1.00E+00	--	4.00E-02	--
Arsenic, Inorganic		3.00E-02	1.00E+00	1.50E+00	5.49E+00	3.00E-04	3.30E+02	3.00E-02	1.00E+00	9.50E+00	7.59E-01	3.50E-06	3.15E+00
Benzaldehyde		--	1.00E+00	--	--	1.00E-01	--	--	1.00E+00	--	--	1.00E-01	--
Benzene		--	1.00E+00	5.50E-02	--	4.00E-03	--	--	1.00E+00	1.00E-01	--	4.00E-03	--
Benzenethiol		--	1.00E+00	--	--	1.00E-03	--	--	1.00E+00	--	--	1.00E-03	--
Benzidine	M	1.00E-01	1.00E+00	2.30E+02	2.59E-03	3.00E-03	9.89E+02	1.00E-01	1.00E+00	5.00E+02	1.01E-03	3.00E-03	8.09E+02
Beryllium and compounds		--	7.00E-03	--	--	1.40E-05	--	1.00E-02	1.00E+00	--	--	2.00E-04	5.39E+02
Bromodichloromethane		--	1.00E+00	6.20E-02	--	2.00E-02	--	--	1.00E+00	1.30E-01	--	2.00E-02	--
Bromoform		--	1.00E+00	7.90E-03	--	2.00E-02	--	--	1.00E+00	1.10E-02	--	2.00E-02	--
Butadiene, 1,3-		--	1.00E+00	3.40E+00	--	--	--	--	1.00E+00	6.00E-01	--	--	--
Butanol, N-		--	1.00E+00	--	--	1.00E-01	--	--	1.00E+00	--	--	1.00E-01	--
Butylbenzene, n-		--	1.00E+00	--	--	5.00E-02	--	--	1.00E+00	--	--	5.00E-02	--
Butylbenzene, sec-		--	1.00E+00	--	--	1.00E-01	--	--	1.00E+00	--	--	1.00E-01	--
Butylbenzene, tert-		--	1.00E+00	--	--	1.00E-01	--	--	1.00E+00	--	--	1.00E-01	--
Cadmium (Diet)		1.00E-03	2.50E-02	--	--	2.50E-05	8.24E+02	1.00E-03	1.00E+00	--	--	6.30E-06	1.24E+03
Carbon Tetrachloride		--	1.00E+00	7.00E-02	--	4.00E-03	--	--	1.00E+00	1.50E-01	--	4.00E-03	--
Chlordane		4.00E-02	1.00E+00	3.50E-01	1.77E+01	5.00E-04	4.12E+02	5.00E-02	1.00E+00	1.30E+00	3.33E+00	5.00E-04	2.70E+02
Chloro-2-methylaniline, 4-		1.00E-01	1.00E+00	1.00E-01	2.47E+01	3.00E-03	9.89E+02	1.00E-01	1.00E+00	2.70E-01	8.01E+00	3.00E-03	8.09E+02
Chloroacetaldehyde, 2-		--	1.00E+00	2.70E-01	--	--	--	--	1.00E+00	2.70E-01	--	--	--
Chlorobutane, 1-		--	1.00E+00	--	--	4.00E-02	--	--	1.00E+00	--	--	4.00E-02	--
Chlorotoluene, o-		--	1.00E+00	--	--	2.00E-02	--	--	1.00E+00	--	--	2.00E-02	--
Chlorotoluene, p-		--	1.00E+00	--	--	2.00E-02	--	--	1.00E+00	--	--	2.00E-02	--
Chromium(III), Insoluble Salts		--	1.30E-02	--	--	1.95E-02	--	1.00E-02	1.30E-02	--	--	1.95E-02	5.26E+04
Crotonaldehyde, trans-		--	1.00E+00	1.90E+00	--	1.00E-03	--	--	1.00E+00	1.90E+00	--	1.00E-03	--

Table A-4a. USEPA RSLs and DTSC-SLs for a Residential Receptor Exposed to Soil via Dermal Contact

Description	Variable	USEPA Value	DTSC Value	Units
Dermal Soil Absorption Factor[a]	ABS_d[a]	chemical-specific		unitless
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	yrs
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	yrs
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	yrs
Age-dependent Adjustment Factor, 16-26	$ADAF_{16-26}$	1	1	yrs
Soil-to-Skin Adherence Factor, adult	AF_a	0.07	0.07	mg/cm^2-day
Soil-to-Skin Adherence Factor, child	AF_c	0.2	0.2	mg/cm^2-day
Averaging Time, Carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, adult	$AT_{nc,a}$	20	20	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
Body Weight, adult	BW_a	80	80	kg
Body Weight, child	BW_c	15	15	kg
Carcinogenic adjustment factor	CAF_O	0.804	0.804	dimensionless
Conversion Factor	CF_d	1E-06	1E-06	kg/mg
Fraction of EV in Contact with Soil, resident	EC_r	1	1	unitless
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-26	ED_{16-26}	10	10	yrs
Exposure Duration, adult	ED_a	20	20	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Event Frequency, resident	EV_r	1	1	events/day
Mutagenic adjustment factor	MAF_O	0.202	0.202	dimensionless
Refererenc Dose Adjusted for GI Absorption	RfD_d	chemical-specific		mg/kg-day
(Regional) Screening Level, dermal	$(R)SL_D$	derived herein		mg/kg
Exposed Body Surface Area, adult	SA_a	6032	6032	cm^2
Exposed Body Surface Area, child	SA_c	2373	2900	cm^2
Oral Slope Factor Adjusted for GI Absorption	SF_d	chemical-specific		(mg/kg-day)$^{-1}$
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless

Equations:

Carcinogens:

$$(R)SL_D = \frac{TR \times (AT_c \times 365\ day/year)}{SF_d \times EF_r \times EV_r \times EC_r \times \left(\frac{ED_c \times SA_c \times AF_c}{BW_c} + \frac{ED_a \times SA_a \times AF_a}{BW_a}\right) \times ABS_d \times CF_d}$$

Mutagens:

$$(R)SL_D = \frac{TR \times (AT_c \times 365\ days/year)}{SF_d \times EF_r \times EV_r \times EC_r \times \left(\frac{\frac{ED_{0-2} \times AF_c \times SA_c \times ADAF_{0-2}}{BW_c} + \frac{ED_{2-6} \times AF_c \times SA_c \times ADAF_{2-6}}{BW_c} + \frac{ED_{6-16} \times AF_a \times SA_a \times ADAF_{6-16}}{BW_a} + \frac{ED_{16-26} \times AF_a \times SA_a \times ADAF_{16-26}}{BW_a}}{}\right) \times ABS_d \times CF_d}$$

Trichloroethene:

$$(R)SL_D = \frac{TR \times (AT_c \times 365\ days/year)}{SF_d \times EV_r \times EC_r \times ABS_d \times CF_d \times \left\{\left[CAF_O \times \left(\frac{ED_c \times EF_r \times SA_c \times AF_c}{BW_c} + \frac{ED_a \times EF_r \times SA_a \times AF_a}{BW_a}\right)\right] + \left[MAF_O \times \left(\frac{\frac{ED_{0-2} \times EF_r \times AF_c \times SA_c \times ADAF_{0-2}}{BW_c} + \frac{ED_{2-6} \times EF_r \times AF_c \times SA_c \times ADAF_{2-6}}{BW_c} + \frac{ED_{6-16} \times EF_r \times AF_a \times SA_a \times ADAF_{6-16}}{BW_a} + \frac{ED_{16-26} \times EF_r \times AF_a \times SA_a \times ADAF_{16-26}}{BW_a}}{}\right)\right]\right\}}$$

Vinyl Chloride:

$$(R)SL_D = \frac{TR}{SF_d \times EV_r \times EC_r \times \left[\left(\frac{EF_r \times \left(\frac{ED_c \times SA_c \times AF_c}{BW_c} + \frac{ED_a \times SA_a \times AF_a}{BW_a}\right) \times ABS_d \times CF_d}{AT_c \times 365\frac{days}{year}}\right) + \left(\frac{SA_c \times AF_c \times ABS_d \times CF_d}{BW_c}\right)\right]}$$

Noncarcinogens:

$$(R)SL_D = \frac{THQ \times \left(AT_{nc,c} \times 365\frac{day}{year}\right) \times BW_c}{EF_r \times ED_c \times \frac{1}{RfD_d} \times EV_r \times EC_r \times SA_c \times AF_c \times ABS_d \times CF_d}$$

DTSC Cadmium - noncarcinogenic:

$$SL_{D-adult,Cd} = \frac{THQ \times \left(AT_{nc,26-yr\ adult} \times 365\frac{day}{year}\right) \times BW_a}{EF_r \times ED_{26-yr\ adult} \times \frac{1}{RfD_d} \times EV_r \times EC_r \times SA_a \times AF_a \times ABS_d \times CF_d}$$

		Residential USEPA RSL$_D$						Residential DTSC-SL$_D$					
Analyte	**Mutagen?**	**ABS_d**[a] (unitless)	**GI Absorption** (unitless)	**SF_d** (mg/kg-day)$^{-1}$	**Cancer** (mg/kg)	**RfD_d** (mg/kg-day)	**Noncancer** (mg/kg)	**ABS_d**[a] (unitless)	**GI Absorption** (unitless)	**SF_d** (mg/kg-day)$^{-1}$	**Cancer** (mg/kg)	**RfD_d** (mg/kg-day)	**Noncancer** (mg/kg)
Cyanides													
~Cyanogen		--	1.00E+00	--	--	1.00E-03	--	--	1.00E+00	--	--	1.00E-03	--
~Cyanogen Bromide		--	1.00E+00	--	--	9.00E-02	--	--	1.00E+00	--	--	9.00E-02	--
~Cyanogen Chloride		--	1.00E+00	--	--	5.00E-02	--	--	1.00E+00	--	--	5.00E-02	--
~Potassium Silver Cyanide		--	4.00E-02	--	--	2.00E-04	--	1.00E-02	4.00E-02	--	--	2.00E-04	5.39E+02
~Silver Cyanide		--	4.00E-02	--	--	4.00E-03	--	1.00E-02	4.00E-02	--	--	4.00E-03	1.08E+04
Dibromobenzene, 1,3-		--	1.00E+00	--	--	4.00E-04	--	--	1.00E+00	--	--	4.00E-04	--
Dibromobenzene, 1,4-		--	1.00E+00	--	--	1.00E-02	--	--	1.00E+00	--	--	1.00E-02	--
Dibromochloromethane		--	1.00E+00	8.40E-02	--	2.00E-02	--	--	1.00E+00	8.40E-02	--	2.00E-02	--
Dibromoethane, 1,2-		--	1.00E+00	2.00E+00	--	9.00E-03	--	--	1.00E+00	3.60E+00	--	9.00E-03	--
Dichlorobenzidine, 3,3'-		1.00E-01	1.00E+00	4.50E-01	5.49E+00	--	--	1.00E-01	1.00E+00	1.20E+00	1.80E+00	--	--
Dichloroethane, 1,1-		--	1.00E+00	5.70E-03	--	2.00E-01	--	--	1.00E+00	5.70E-03	--	2.00E-01	--
Dichloroethylene, 1,2-cis-		--	1.00E+00	--	--	2.00E-03	--	--	1.00E+00	--	--	2.00E-03	--
Dichloroethylene, 1,2-trans-		--	1.00E+00	--	--	2.00E-02	--	--	1.00E+00	--	--	2.00E-02	--
Dichloropropane, 1,3-		--	1.00E+00	--	--	2.00E-02	--	--	1.00E+00	--	--	2.00E-02	--
Dichloropropene, 1,3-		--	1.00E+00	1.00E-01	--	3.00E-02	--	--	1.00E+00	9.10E-02	--	3.00E-02	--
Dimethylaniline, N,N-		--	1.00E+00	--	--	2.00E-03	--	--	1.00E+00	--	--	2.00E-03	--
Epichlorohydrin		--	1.00E+00	9.90E-03	--	6.00E-03	--	--	1.00E+00	8.00E-02	--	6.00E-03	--
Ethyl Chloride (Chloroethane)		--	1.00E+00	--	--	--	--	--	1.00E+00	4.70E-03	--	--	--
Ethyl Ether		--	1.00E+00	--	--	2.00E-01	--	--	1.00E+00	--	--	2.00E-01	--
Furans													
~Furan		3.00E-02	1.00E+00	--	--	1.00E-03	1.10E+03	3.00E-02	1.00E+00	--	--	1.00E-03	8.99E+02
Hexachlorobutadiene		--	1.00E+00	7.80E-02	--	1.00E-03	--	--	1.00E+00	7.80E-02	--	1.00E-03	--
Hexachlorocyclohexane, Technical		1.00E-01	1.00E+00	1.80E+00	1.37E+00	--	--	1.00E-01	1.00E+00	4.00E+00	5.41E-01	--	--
Isobutyl Alcohol		--	1.00E+00	--	--	3.00E-01	--	--	1.00E+00	--	--	3.00E-01	--

Table A-4a. USEPA RSLs and DTSC-SLs for a Residential Receptor Exposed to Soil via Dermal Contact

Description	Variable	USEPA Value	DTSC Value	Units
Dermal Soil Absorption Factor[a]	ABS_d[a]	chemical-specific		unitless
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	yrs
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	yrs
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	yrs
Age-dependent Adjustment Factor, 16-26	$ADAF_{16-26}$	1	1	yrs
Soil-to-Skin Adherence Factor, adult	AF_a	0.07	0.07	mg/cm^2-day
Soil-to-Skin Adherence Factor, child	AF_c	0.2	0.2	mg/cm^2-day
Averaging Time, Carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, adult	$AT_{nc,a}$	20	20	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
Body Weight, adult	BW_a	80	80	kg
Body Weight, child	BW_c	15	15	kg
Carcinogenic adjustment factor	CAF_O	0.804	0.804	dimensionless
Conversion Factor	CF_d	1E-06	1E-06	kg/mg
Fraction of EV in Contact with Soil, resident	EC_r	1	1	unitless
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-26	ED_{16-26}	10	10	yrs
Exposure Duration, adult	ED_a	20	20	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Event Frequency, resident	EV_r	1	1	events/day
Mutagenic adjustment factor	MAF_O	0.202	0.202	dimensionless
Refererenc Dose Adjusted for GI Absorption	RfD_d	chemical-specific		mg/kg-day
(Regional) Screening Level, dermal	$(R)SL_D$	derived herein		mg/kg
Exposed Body Surface Area, adult	SA_a	6032	6032	cm^2
Exposed Body Surface Area, child	SA_c	2373	2900	cm^2
Oral Slope Factor Adjusted for GI Absorption	SF_d	chemical-specific		(mg/kg-day)$^{-1}$
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless

Equations:

Carcinogens:

$$(R)SL_D = \frac{TR \times (AT_c \times 365\ day/year)}{SF_d \times EF_r \times EV_r \times EC_r \times \left(\frac{ED_c \times SA_c \times AF_c}{BW_c} + \frac{ED_a \times SA_a \times AF_a}{BW_a}\right) \times ABS_d \times CF_d}$$

Mutagens:

$$(R)SL_D = \frac{TR \times (AT_c \times 365\ days/year)}{SF_d \times EF_r \times EV_r \times EC_r \times \left(\frac{\frac{ED_{0-2} \times AF_c \times SA_c \times ADAF_{0-2}}{BW_c} + \frac{ED_{2-6} \times AF_c \times SA_c \times ADAF_{2-6}}{BW_c} + \frac{ED_{6-16} \times AF_a \times SA_a \times ADAF_{6-16}}{BW_a} + \frac{ED_{16-26} \times AF_a \times SA_a \times ADAF_{16-26}}{BW_a}}{}\right) \times ABS_d \times CF_d}$$

Trichloroethene:

$$(R)SL_D = \frac{TR \times (AT_c \times 365\ days/year)}{SF_d \times EV_r \times EC_r \times ABS_d \times CF_d \times \left\{\left[CAF_O \times \left(\frac{ED_c \times EF_r \times SA_c \times AF_c}{BW_c} + \frac{ED_a \times EF_r \times SA_a \times AF_a}{BW_a}\right)\right] + \left[MAF_O \times \left(\frac{\frac{ED_{0-2} \times EF_r \times AF_c \times SA_c \times ADAF_{0-2}}{BW_c} + \frac{ED_{2-6} \times EF_r \times AF_c \times SA_c \times ADAF_{2-6}}{BW_c} + \frac{ED_{6-16} \times EF_r \times AF_a \times SA_a \times ADAF_{6-16}}{BW_a} + \frac{ED_{16-26} \times EF_r \times AF_a \times SA_a \times ADAF_{16-26}}{BW_a}}{}\right)\right]\right\}}$$

Vinyl Chloride:

$$(R)SL_D = \frac{TR}{SF_d \times EV_r \times EC_r \times \left[\left(\frac{EF_r \times \left(\frac{ED_c \times SA_c \times AF_c}{BW_c} + \frac{ED_a \times SA_a \times AF_a}{BW_a}\right) \times ABS_d \times CF_d}{AT_c \times 365\frac{days}{year}}\right) + \left(\frac{SA_c \times AF_c \times ABS_d \times CF_d}{BW_c}\right)\right]}$$

Noncarcinogens:

$$(R)SL_D = \frac{THQ \times \left(AT_{nc,c} \times 365\frac{day}{year}\right) \times BW_c}{EF_r \times ED_c \times \frac{1}{RfD_d} \times EV_r \times EC_r \times SA_c \times AF_c \times ABS_d \times CF_d}$$

DTSC Cadmium - noncarcinogenic:

$$SL_{D-adult,Cd} = \frac{THQ \times \left(AT_{nc,26-yr\ adult} \times 365\frac{day}{year}\right) \times BW_a}{EF_r \times ED_{26-yr\ adult} \times \frac{1}{RfD_d} \times EV_r \times EC_r \times SA_a \times AF_a \times ABS_d \times CF_d}$$

		Residential USEPA RSL_D						Residential DTSC-SL_D					
Analyte	**Mutagen?**	**ABS_d[a]** (unitless)	**GI Absorption** (unitless)	**SF_d** (mg/kg-day)$^{-1}$	**Cancer** (mg/kg)	**RfD_d** (mg/kg-day)	**Noncancer** (mg/kg)	**ABS_d[a]** (unitless)	**GI Absorption** (unitless)	**SF_d** (mg/kg-day)$^{-1}$	**Cancer** (mg/kg)	**RfD_d** (mg/kg-day)	**Noncancer** (mg/kg)
Lead Compounds													
~Lead subacetate		1.00E-01	1.00E+00	8.50E-03	2.91E+02	--	--	1.00E-01	1.00E+00	3.80E-02	5.69E+01	--	--
~Tetraethyl Lead		--	1.00E+00	--	--	1.00E-07	--	--	1.00E+00	--	--	1.00E-07	--
Lewisite		--	1.00E+00	--	--	5.00E-06	--	--	1.00E+00	--	--	5.00E-06	--
Manganese (Non-diet)		--	4.00E-02	--	--	9.60E-04	--	1.00E-02	4.00E-02	--	--	9.60E-04	2.59E+03
Mercury Compounds													
~Mercuric Chloride (and other Mercury salts)		--	7.00E-02	--	--	2.10E-05	--	1.00E-02	7.00E-02	--	--	1.12E-05	3.02E+01
~Mercury (elemental)		--	1.00E+00	--	--	--	--	1.00E-02	1.00E+00	--	--	1.60E-04	4.32E+02
Methyl Acetate		--	1.00E+00	--	--	1.00E+00	--	--	1.00E+00	--	--	1.00E+00	--
Methylene Chloride	M	--	1.00E+00	2.00E-03	--	6.00E-03	--	--	1.00E+00	1.40E-02	--	6.00E-03	--
Methylene-bis(2-chloroaniline), 4,4'-	M	1.00E-01	1.00E+00	1.00E-01	5.97E+00	2.00E-03	6.59E+02	1.00E-01	1.00E+00	1.50E+00	3.36E-01	2.00E-03	5.39E+02
Methylstyrene, Alpha-		--	1.00E+00	--	--	7.00E-02	--	--	1.00E+00	--	--	7.00E-02	--
Mineral oils		--	1.00E+00	--	--	3.00E+00	--	--	1.00E+00	--	--	3.00E+00	--
Nickel Hydroxide		--	4.00E-02	--	--	4.40E-04	--	1.00E-02	4.00E-02	--	--	4.40E-04	1.19E+03
Nickel Oxide		--	4.00E-02	--	--	4.40E-04	--	1.00E-02	4.00E-02	--	--	4.40E-04	1.19E+03
Nickel Refinery Dust		--	4.00E-02	--	--	4.40E-04	--	1.00E-02	4.00E-02	2.28E+01	9.51E-01	4.40E-04	1.19E+03
Nickel Soluble Salts		--	4.00E-02	--	--	8.00E-04	--	1.00E-02	4.00E-02	--	--	4.40E-04	1.19E+03
Nickel Subsulfide		--	4.00E-02	4.25E+01	--	4.40E-04	--	1.00E-02	4.00E-02	4.25E+01	5.09E-01	4.40E-04	1.19E+03
Pentachloroethane		--	1.00E+00	9.00E-02	--	--	--	--	1.00E+00	9.00E-02	--	--	--
Phosphorus, White		--	1.00E+00	--	--	2.00E-05	--	--	1.00E+00	--	--	2.00E-05	--
Phthalates													
~Dimethylterephthalate		--	1.00E+00	--	--	1.00E-01	--	--	1.00E+00	--	--	1.00E-01	--
Silver		--	4.00E-02	--	--	2.00E-04	--	1.00E-02	4.00E-02	--	--	2.00E-04	5.39E+02
Tetrachloroethane, 1,1,1,2-		--	1.00E+00	2.60E-02	--	3.00E-02	--	--	1.00E+00	2.60E-02	--	3.00E-02	--
Tetrachloroethane, 1,1,2,2-		--	1.00E+00	2.00E-01	--	2.00E-02	--	--	1.00E+00	2.70E-01	--	2.00E-02	--
Tetrachloroethylene		--	1.00E+00	2.10E-03	--	6.00E-03	--	--	1.00E+00	5.40E-01	--	6.00E-03	--

Table A-4a. USEPA RSLs and DTSC-SLs for a Residential Receptor Exposed to Soil via Dermal Contact

Description	Variable	USEPA Value	DTSC Value	Units
Dermal Soil Absorption Factor[a]	ABS_d[a]	chemical-specific		unitless
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	yrs
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	yrs
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	yrs
Age-dependent Adjustment Factor, 16-26	$ADAF_{16-26}$	1	1	yrs
Soil-to-Skin Adherence Factor, adult	AF_a	0.07	0.07	mg/cm^2-day
Soil-to-Skin Adherence Factor, child	AF_c	0.2	0.2	mg/cm^2-day
Averaging Time, Carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, adult	$AT_{nc,a}$	20	20	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
Body Weight, adult	BW_a	80	80	kg
Body Weight, child	BW_c	15	15	kg
Carcinogenic adjustment factor	CAF_O	0.804	0.804	dimensionless
Conversion Factor	CF_d	1E-06	1E-06	kg/mg
Fraction of EV in Contact with Soil, resident	EC_r	1	1	unitless
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-26	ED_{16-26}	10	10	yrs
Exposure Duration, adult	ED_a	20	20	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Event Frequency, resident	EV_r	1	1	events/day
Mutagenic adjustment factor	MAF_O	0.202	0.202	dimensionless
Refererenc Dose Adjusted for GI Absorption	RfD_d	chemical-specific		mg/kg-day
(Regional) Screening Level, dermal	$(R)SL_D$	derived herein		mg/kg
Exposed Body Surface Area, adult	SA_a	6032	6032	cm^2
Exposed Body Surface Area, child	SA_c	2373	2900	cm^2
Oral Slope Factor Adjusted for GI Absorption	SF_d	chemical-specific		(mg/kg-day)$^{-1}$
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless

Equations:

Carcinogens:

$$(R)SL_D = \frac{TR \times (AT_c \times 365\ day/year)}{SF_d \times EF_r \times EV_r \times EC_r \times \left(\frac{ED_c \times SA_c \times AF_c}{BW_c} + \frac{ED_a \times SA_a \times AF_a}{BW_a}\right) \times ABS_d \times CF_d}$$

Mutagens:

$$(R)SL_D = \frac{TR \times (AT_c \times 365\ days/year)}{SF_d \times EF_r \times EV_r \times EC_r \times \left(\frac{\frac{ED_{0-2} \times AF_c \times SA_c \times ADAF_{0-2}}{BW_c} + \frac{ED_{2-6} \times AF_c \times SA_c \times ADAF_{2-6}}{BW_c} + \frac{ED_{6-16} \times AF_a \times SA_a \times ADAF_{6-16}}{BW_a} + \frac{ED_{16-26} \times AF_a \times SA_a \times ADAF_{16-26}}{BW_a}}{}\right) \times ABS_d \times CF_d}$$

Trichloroethene:

$$(R)SL_D = \frac{TR \times (AT_c \times 365\ days/year)}{SF_d \times EV_r \times EC_r \times ABS_d \times CF_d \times \left\{\left[CAF_O \times \left(\frac{ED_c \times EF_r \times SA_c \times AF_c}{BW_c} + \frac{ED_a \times EF_r \times SA_a \times AF_a}{BW_a}\right)\right] + \left[MAF_O \times \left(\frac{\frac{ED_{0-2} \times EF_r \times AF_c \times SA_c \times ADAF_{0-2}}{BW_c} + \frac{ED_{2-6} \times EF_r \times AF_c \times SA_c \times ADAF_{2-6}}{BW_c} + \frac{ED_{6-16} \times EF_r \times AF_a \times SA_a \times ADAF_{6-16}}{BW_a} + \frac{ED_{16-26} \times EF_r \times AF_a \times SA_a \times ADAF_{16-26}}{BW_a}}{}\right)\right]\right\}}$$

Vinyl Chloride:

$$(R)SL_D = \frac{TR}{SF_d \times EV_r \times EC_r \times \left[\left(\frac{EF_r \times \left(\frac{ED_c \times SA_c \times AF_c}{BW_c} + \frac{ED_a \times SA_a \times AF_a}{BW_a}\right) \times ABS_d \times CF_d}{AT_c \times 365\frac{days}{year}}\right) + \left(\frac{SA_c \times AF_c \times ABS_d \times CF_d}{BW_c}\right)\right]}$$

Noncarcinogens:

$$(R)SL_D = \frac{THQ \times \left(AT_{nc,c} \times 365\frac{day}{year}\right) \times BW_c}{EF_r \times ED_c \times \frac{1}{RfD_d} \times EV_r \times EC_r \times SA_c \times AF_c \times ABS_d \times CF_d}$$

DTSC Cadmium - noncarcinogenic:

$$SL_{D-adult,Cd} = \frac{THQ \times \left(AT_{nc,26-yr\ adult} \times 365\frac{day}{year}\right) \times BW_a}{EF_r \times ED_{26-yr\ adult} \times \frac{1}{RfD_d} \times EV_r \times EC_r \times SA_a \times AF_a \times ABS_d \times CF_d}$$

		Residential USEPA RSL_D						Residential DTSC-SL_D					
Analyte	**Mutagen?**	**ABS_d**[a] (unitless)	**GI Absorption** (unitless)	**SF_d** (mg/kg-day)$^{-1}$	**Cancer** (mg/kg)	**RfD_d** (mg/kg-day)	**Noncancer** (mg/kg)	**ABS_d**[a] (unitless)	**GI Absorption** (unitless)	**SF_d** (mg/kg-day)$^{-1}$	**Cancer** (mg/kg)	**RfD_d** (mg/kg-day)	**Noncancer** (mg/kg)
Toluene		--	1.00E+00	--	--	8.00E-02	--	--	1.00E+00	--	--	8.00E-02	--
Tri-n-butyltin		--	1.00E+00	--	--	3.00E-04	--	--	1.00E+00	--	--	3.00E-04	--
Trichlorobenzene, 1,2,3-		--	1.00E+00	--	--	8.00E-04	--	--	1.00E+00	--	--	8.00E-04	--
Trichloroethane, 1,1,1-		--	1.00E+00	--	--	2.00E+00	--	--	1.00E+00	--	--	2.00E+00	--
Trichlorofluoromethane		--	1.00E+00	--	--	3.00E-01	--	--	1.00E+00	--	--	3.00E-01	--
Trichlorophenol, 2,4,6-		1.00E-01	1.00E+00	1.10E-02	2.25E+02	1.00E-03	3.30E+02	1.00E-01	1.00E+00	7.00E-02	3.09E+01	1.00E-03	2.70E+02
Trichloropropane, 1,1,2-		--	1.00E+00	--	--	5.00E-03	--	--	1.00E+00	--	--	5.00E-03	--
Trichloropropane, 1,2,3-	M	--	1.00E+00	3.00E+01	--	4.00E-03	--	--	1.00E+00	3.00E+01	--	4.00E-03	--
Trimethylbenzene, 1,3,5-		--	1.00E+00	--	--	1.00E-02	--	--	1.00E+00	--	--	1.00E-02	--
Trimethylpentene, 2,4,4-		--	1.00E+00	--	--	1.00E-02	--	--	1.00E+00	--	--	1.00E-02	--
Vanadium and Compounds		--	2.60E-02	--	--	1.31E-04	--	1.00E-02	2.60E-02	--	--	1.31E-04	3.53E+02
Vinyl Chloride	M (VC)	--	1.00E+00	7.20E-01	--	3.00E-03	--	--	1.00E+00	2.70E-01	--	3.00E-03	--
Additional Analytes													
Beryllium Sulfate		--	7.00E-03	--	--	1.40E-05	--	1.00E-02	1.00E+00	--	--	2.00E-04	5.39E+02
Dichlorobenzene, 1,3-		--	1.00E+00	--	--	--	--	--	1.00E+00	--	--	3.00E-02	--
Methylcyclohexane		--	1.00E+00	--	--	--	--	--	1.00E+00	--	--	--	--

[a] Dermal Absorption Factor (ABS_d) values for the USEPA RSLs are from the USEPA RSL tables; values for the DTSC-SLs are from the RSL tables and from the DTSC Preliminary Endangerment Assessment (PEA) Manual, October 2015.

"--" = no value

Table A-4b. USEPA RSLs and DTSC-SLs for a Commercial/Industrial Receptor Exposed to Soil via Dermal Contact

Description	Variable	USEPA Value	DTSC Value	
Dermal Soil Absorption Factor[a]	ABS_d[a]	chemical-specific		unitless
Soil-to-Skin Adherence Factor, worker	AF_w	0.12	0.2	mg/cm^2-day
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, adult	$AT_{nc,w}$	25	25	yrs
Body Weight, adult	BW_a	80	80	kg
Conversion Factor	CF_d	1E-06	1E-06	kg/mg
COPC Concentration in Soil	C_{soil}	chemical-specific		mg/kg
Fraction of EV in Contact with Soil, worker	EC_w	1	1	unitless
Exposure Duration, worker	ED_w	25	25	yrs
Exposure Frequency, worker	EF_w	250	250	days/yr
Event Frequency, worker	EV_w	1	1	events/day
Oral Reference Dose Adjusted for GI Absorption	RfD_d	chemical-specific		mg/kg-day
(Regional) Screening Level, dermal	$(R)SL_D$	derived herein		mg/kg
Exposed Body Surface Area, worker	SA_w	3527	6032	cm^2
Oral Slope Factor Adjusted for GI Absorption	SF_d	chemical-specific		$(mg/kg\text{-}day)^{-1}$
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless

Equations:

Carcinogens:

$$(R)SL_D = \frac{TR \times AT_c \times 365\frac{days}{year} \times BW_a}{EF_w \times ED_w \times EV_r \times EC_r \times SF_D \times SA_w \times AF_w \times ABS_d \times CF_d}$$

Noncarcinogens:

$$(R)SL_D = \frac{THQ \times AT_{nc,w} \times 365\frac{days}{year} \times BW_a}{EF_w \times ED_w \times EV_r \times EC_r \times \frac{1}{RfD_D} \times SA_w \times AF_w \times ABS_d \times CF_d}$$

	Commercial/Industrial USEPA RSL_D						Commercial/Industrial DTSC-SL_D					
	ABS_d[a]	**GI Absorption**	**SF_d**	**Cancer**	**RfD_d**	**Noncancer**	**ABS_d**[a]	**GI Absorption**	**SF_d**	**Cancer**	**RfD_d**	**Noncancer**
Analyte	(unitless)	(unitless)	$(mg/kg\text{-}day)^{-1}$	(mg/kg)	(mg/kg-day)	(mg/kg)	(unitless)	(unitless)	$(mg/kg\text{-}day)^{-1}$	(mg/kg)	(mg/kg-day)	(mg/kg)
USEPA RSL Analytes												
Acrylamide	1.00E-01	1.00E+00	5.00E-01	1.55E+01	2.00E-03	5.52E+03	1.00E-01	1.00E+00	4.50E+00	6.02E-01	2.00E-03	1.94E+03
Acrylonitrile	--	1.00E+00	5.40E-01	--	4.00E-02	--	--	1.00E+00	1.00E+00	--	4.00E-02	--
Arsenic, Inorganic	3.00E-02	1.00E+00	1.50E+00	1.72E+01	3.00E-04	2.76E+03	3.00E-02	1.00E+00	9.50E+00	9.51E-01	3.50E-06	1.13E+01
Benzaldehyde	--	1.00E+00	--	--	1.00E-01	--	--	1.00E+00	--	--	1.00E-01	--
Benzene	--	1.00E+00	5.50E-02	--	4.00E-03	--	--	1.00E+00	1.00E-01	--	4.00E-03	--
Benzenethiol	--	1.00E+00	--	--	1.00E-03	--	--	1.00E+00	--	--	1.00E-03	--
Benzidine	1.00E-01	1.00E+00	2.30E+02	3.36E-02	3.00E-03	8.28E+03	1.00E-01	1.00E+00	5.00E+02	5.42E-03	3.00E-03	2.90E+03
Beryllium and compounds	--	7.00E-03	--	--	1.40E-05	--	1.00E-02	1.00E+00	--	--	2.00E-04	1.94E+03
Bromodichloromethane	--	1.00E+00	6.20E-02	--	2.00E-02	--	--	1.00E+00	1.30E-01	--	2.00E-02	--
Bromoform	--	1.00E+00	7.90E-03	--	2.00E-02	--	--	1.00E+00	1.10E-02	--	2.00E-02	--
Butadiene, 1,3-	--	1.00E+00	3.40E+00	--	--	--	--	1.00E+00	6.00E-01	--	--	--
Butanol, N-	--	1.00E+00	--	--	1.00E-01	--	--	1.00E+00	--	--	1.00E-01	--
Butylbenzene, n-	--	1.00E+00	--	--	5.00E-02	--	--	1.00E+00	--	--	5.00E-02	--
Butylbenzene, sec-	--	1.00E+00	--	--	1.00E-01	--	--	1.00E+00	--	--	1.00E-01	--
Butylbenzene, tert-	--	1.00E+00	--	--	1.00E-01	--	--	1.00E+00	--	--	1.00E-01	--
Cadmium (Diet)	1.00E-03	2.50E-02	--	--	2.50E-05	6.90E+03	1.00E-03	1.00E+00	--	--	6.30E-06	6.10E+02
Carbon Tetrachloride	--	1.00E+00	7.00E-02	--	4.00E-03	--	--	1.00E+00	1.50E-01	--	4.00E-03	--
Chlordane	4.00E-02	1.00E+00	3.50E-01	5.52E+01	5.00E-04	3.45E+03	5.00E-02	1.00E+00	1.30E+00	4.17E+00	5.00E-04	9.68E+02
Chloro-2-methylaniline, 4-	1.00E-01	1.00E+00	1.00E-01	7.73E+01	3.00E-03	8.28E+03	1.00E-01	1.00E+00	2.70E-01	1.00E+01	3.00E-03	2.90E+03
Chloroacetaldehyde, 2-	--	1.00E+00	2.70E-01	--	--	--	--	1.00E+00	2.70E-01	--	--	--
Chlorobutane, 1-	--	1.00E+00	--	--	4.00E-02	--	--	1.00E+00	--	--	4.00E-02	--
Chlorotoluene, o-	--	1.00E+00	--	--	2.00E-02	--	--	1.00E+00	--	--	2.00E-02	--
Chlorotoluene, p-	--	1.00E+00	--	--	2.00E-02	--	--	1.00E+00	--	--	2.00E-02	--
Chromium(III), Insoluble Salts	--	1.30E-02	--	--	1.95E-02	--	1.00E-02	1.30E-02	--	--	1.95E-02	1.89E+05
Crotonaldehyde, trans-	--	1.00E+00	1.90E+00	--	1.00E-03	--	--	1.00E+00	1.90E+00	--	1.00E-03	--

Table A-4b. USEPA RSLs and DTSC-SLs for a Commercial/Industrial Receptor Exposed to Soil via Dermal Contact

Description	Variable	USEPA Value	DTSC Value	
Dermal Soil Absorption Factor[a]	ABS_d[a]	chemical-specific		unitless
Soil-to-Skin Adherence Factor, worker	AF_w	0.12	0.2	mg/cm^2-day
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, adult	$AT_{nc,w}$	25	25	yrs
Body Weight, adult	BW_a	80	80	kg
Conversion Factor	CF_d	1E-06	1E-06	kg/mg
COPC Concentration in Soil	C_{soil}	chemical-specific		mg/kg
Fraction of EV in Contact with Soil, worker	EC_w	1	1	unitless
Exposure Duration, worker	ED_w	25	25	yrs
Exposure Frequency, worker	EF_w	250	250	days/yr
Event Frequency, worker	EV_w	1	1	events/day
Oral Reference Dose Adjusted for GI Absorption	RfD_d	chemical-specific		mg/kg-day
(Regional) Screening Level, dermal	$(R)SL_D$	derived herein		mg/kg
Exposed Body Surface Area, worker	SA_w	3527	6032	cm^2
Oral Slope Factor Adjusted for GI Absorption	SF_d	chemical-specific		$(mg/kg\text{-}day)^{-1}$
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless

Equations:

Carcinogens:

$$(R)SL_D = \frac{TR \times AT_c \times 365\frac{days}{year} \times BW_a}{EF_w \times ED_w \times EV_r \times EC_r \times SF_D \times SA_w \times AF_w \times ABS_d \times CF_d}$$

Noncarcinogens:

$$(R)SL_D = \frac{THQ \times AT_{nc,w} \times 365\frac{days}{year} \times BW_a}{EF_w \times ED_w \times EV_r \times EC_r \times \frac{1}{RfD_D} \times SA_w \times AF_w \times ABS_d \times CF_d}$$

	Commercial/Industrial USEPA RSL_D						Commercial/Industrial DTSC-SL_D					
Analyte	**ABS_d**[a] (unitless)	**GI Absorption** (unitless)	**SF_d** $(mg/kg\text{-}day)^{-1}$	**Cancer** (mg/kg)	**RfD_d** (mg/kg-day)	**Noncancer** (mg/kg)	**ABS_d**[a] (unitless)	**GI Absorption** (unitless)	**SF_d** $(mg/kg\text{-}day)^{-1}$	**Cancer** (mg/kg)	**RfD_d** (mg/kg-day)	**Noncancer** (mg/kg)
Cyanides												
~Cyanogen	--	1.00E+00	--	--	1.00E-03	--	--	1.00E+00	--	--	1.00E-03	--
~Cyanogen Bromide	--	1.00E+00	--	--	9.00E-02	--	--	1.00E+00	--	--	9.00E-02	--
~Cyanogen Chloride	--	1.00E+00	--	--	5.00E-02	--	--	1.00E+00	--	--	5.00E-02	--
~Potassium Silver Cyanide	--	4.00E-02	--	--	2.00E-04	--	1.00E-02	4.00E-02	--	--	2.00E-04	1.94E+03
~Silver Cyanide	--	4.00E-02	--	--	4.00E-03	--	1.00E-02	4.00E-02	--	--	4.00E-03	3.87E+04
Dibromobenzene, 1,3-	--	1.00E+00	--	--	4.00E-04	--	--	1.00E+00	--	--	4.00E-04	--
Dibromobenzene, 1,4-	--	1.00E+00	--	--	1.00E-02	--	--	1.00E+00	--	--	1.00E-02	--
Dibromochloromethane	--	1.00E+00	8.40E-02	--	2.00E-02	--	--	1.00E+00	8.40E-02	--	2.00E-02	--
Dibromoethane, 1,2-	--	1.00E+00	2.00E+00	--	9.00E-03	--	--	1.00E+00	3.60E+00	--	9.00E-03	--
Dichlorobenzidine, 3,3'-	1.00E-01	1.00E+00	4.50E-01	1.72E+01	--	--	1.00E-01	1.00E+00	1.20E+00	2.26E+00	--	--
Dichloroethane, 1,1-	--	1.00E+00	5.70E-03	--	2.00E-01	--	--	1.00E+00	5.70E-03	--	2.00E-01	--
Dichloroethylene, 1,2-cis-	--	1.00E+00	--	--	2.00E-03	--	--	1.00E+00	--	--	2.00E-03	--
Dichloroethylene, 1,2-trans-	--	1.00E+00	--	--	2.00E-02	--	--	1.00E+00	--	--	2.00E-02	--
Dichloropropane, 1,3-	--	1.00E+00	--	--	2.00E-02	--	--	1.00E+00	--	--	2.00E-02	--
Dichloropropene, 1,3-	--	1.00E+00	1.00E-01	--	3.00E-02	--	--	1.00E+00	9.10E-02	--	3.00E-02	--
Dimethylaniline, N,N-	--	1.00E+00	--	--	2.00E-03	--	--	1.00E+00	--	--	2.00E-03	--
Epichlorohydrin	--	1.00E+00	9.90E-03	--	6.00E-03	--	--	1.00E+00	8.00E-02	--	6.00E-03	--
Ethyl Chloride (Chloroethane)	--	1.00E+00	--	--	--	--	--	1.00E+00	4.70E-03	--	--	--
Ethyl Ether	--	1.00E+00	--	--	2.00E-01	--	--	1.00E+00	--	--	2.00E-01	--
Furans												
~Furan	3.00E-02	1.00E+00	--	--	1.00E-03	9.20E+03	3.00E-02	1.00E+00	--	--	1.00E-03	3.23E+03
Hexachlorobutadiene	--	1.00E+00	7.80E-02	--	1.00E-03	--	--	1.00E+00	7.80E-02	--	1.00E-03	--
Hexachlorocyclohexane, Technical	1.00E-01	1.00E+00	1.80E+00	4.29E+00	--	--	1.00E-01	1.00E+00	4.00E+00	6.78E-01	--	--
Isobutyl Alcohol	--	1.00E+00	--	--	3.00E-01	--	--	1.00E+00	--	--	3.00E-01	--
Lead Compounds												
~Lead subacetate	1.00E-01	1.00E+00	8.50E-03	9.09E+02	--	--	1.00E-01	1.00E+00	3.80E-02	7.13E+01	--	--
~Tetraethyl Lead	--	1.00E+00	--	--	1.00E-07	--	--	1.00E+00	--	--	1.00E-07	--

Table A-4b. USEPA RSLs and DTSC-SLs for a Commercial/Industrial Receptor Exposed to Soil via Dermal Contact

Description	Variable	USEPA Value	DTSC Value	
Dermal Soil Absorption Factor[a]	ABS_d[a]	chemical-specific		unitless
Soil-to-Skin Adherence Factor, worker	AF_w	0.12	0.2	mg/cm^2-day
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, adult	$AT_{nc,w}$	25	25	yrs
Body Weight, adult	BW_a	80	80	kg
Conversion Factor	CF_d	1E-06	1E-06	kg/mg
COPC Concentration in Soil	C_{soil}	chemical-specific		mg/kg
Fraction of EV in Contact with Soil, worker	EC_w	1	1	unitless
Exposure Duration, worker	ED_w	25	25	yrs
Exposure Frequency, worker	EF_w	250	250	days/yr
Event Frequency, worker	EV_w	1	1	events/day
Oral Reference Dose Adjusted for GI Absorption	RfD_d	chemical-specific		mg/kg-day
(Regional) Screening Level, dermal	$(R)SL_D$	derived herein		mg/kg
Exposed Body Surface Area, worker	SA_w	3527	6032	cm^2
Oral Slope Factor Adjusted for GI Absorption	SF_d	chemical-specific		$(mg/kg\text{-}day)^{-1}$
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless

Equations:

Carcinogens:

$$(R)SL_D = \frac{TR \times AT_c \times 365\frac{days}{year} \times BW_a}{EF_w \times ED_w \times EV_r \times EC_r \times SF_D \times SA_w \times AF_w \times ABS_d \times CF_d}$$

Noncarcinogens:

$$(R)SL_D = \frac{THQ \times AT_{nc,w} \times 365\frac{days}{year} \times BW_a}{EF_w \times ED_w \times EV_r \times EC_r \times \frac{1}{RfD_D} \times SA_w \times AF_w \times ABS_d \times CF_d}$$

	Commercial/Industrial USEPA RSL_D						Commercial/Industrial DTSC-SL_D					
	ABS_d[a]	**GI Absorption**	**SF_d**	**Cancer**	**RfD_d**	**Noncancer**	**ABS_d**[a]	**GI Absorption**	**SF_d**	**Cancer**	**RfD_d**	**Noncancer**
Analyte	(unitless)	(unitless)	$(mg/kg\text{-}day)^{-1}$	(mg/kg)	(mg/kg-day)	(mg/kg)	(unitless)	(unitless)	$(mg/kg\text{-}day)^{-1}$	(mg/kg)	(mg/kg-day)	(mg/kg)
Lewisite	--	1.00E+00	--	--	5.00E-06	--	--	1.00E+00	--	--	5.00E-06	--
Manganese (Non-diet)	--	4.00E-02	--	--	9.60E-04	--	1.00E-02	4.00E-02	--	--	9.60E-04	9.29E+03
Mercury Compounds												
~Mercuric Chloride (and other Mercury salts)	--	7.00E-02	--	--	2.10E-05	--	1.00E-02	7.00E-02	--	--	1.12E-05	1.08E+02
~Mercury (elemental)	--	1.00E+00	--	--	--	--	1.00E-02	1.00E+00	--	--	1.60E-04	1.55E+03
Methyl Acetate	--	1.00E+00	--	--	1.00E+00	--	--	1.00E+00	--	--	1.00E+00	--
Methylene Chloride	--	1.00E+00	2.00E-03	--	6.00E-03	--	--	1.00E+00	1.40E-02	--	6.00E-03	--
Methylene-bis(2-chloroaniline), 4,4'-	1.00E-01	1.00E+00	1.00E-01	7.73E+01	2.00E-03	5.52E+03	1.00E-01	1.00E+00	1.50E+00	1.81E+00	2.00E-03	1.94E+03
Methylstyrene, Alpha-	--	1.00E+00	--	--	7.00E-02	--	--	1.00E+00	--	--	7.00E-02	--
Mineral oils	--	1.00E+00	--	--	3.00E+00	--	--	1.00E+00	--	--	3.00E+00	--
Nickel Hydroxide	--	4.00E-02	--	--	4.40E-04	--	1.00E-02	4.00E-02	--	--	4.40E-04	4.26E+03
Nickel Oxide	--	4.00E-02	--	--	4.40E-04	--	1.00E-02	4.00E-02	--	--	4.40E-04	4.26E+03
Nickel Refinery Dust	--	4.00E-02	--	--	4.40E-04	--	1.00E-02	4.00E-02	2.28E+01	1.19E+00	4.40E-04	4.26E+03
Nickel Soluble Salts	--	4.00E-02	--	--	8.00E-04	--	1.00E-02	4.00E-02	--	--	4.40E-04	4.26E+03
Nickel Subsulfide	--	4.00E-02	4.25E+01	--	4.40E-04	--	1.00E-02	4.00E-02	4.25E+01	6.38E-01	4.40E-04	4.26E+03
Pentachloroethane	--	1.00E+00	9.00E-02	--	--	--	--	1.00E+00	9.00E-02	--	--	--
Phosphorus, White	--	1.00E+00	--	--	2.00E-05	--	--	1.00E+00	--	--	2.00E-05	--
Phthalates												
~Dimethylterephthalate	--	1.00E+00	--	--	1.00E-01	--	--	1.00E+00	--	--	1.00E-01	--
Silver	--	4.00E-02	--	--	2.00E-04	--	1.00E-02	4.00E-02	--	--	2.00E-04	1.94E+03
Tetrachloroethane, 1,1,1,2-	--	1.00E+00	2.60E-02	--	3.00E-02	--	--	1.00E+00	2.60E-02	--	3.00E-02	--
Tetrachloroethane, 1,1,2,2-	--	1.00E+00	2.00E-01	--	2.00E-02	--	--	1.00E+00	2.70E-01	--	2.00E-02	--
Tetrachloroethylene	--	1.00E+00	2.10E-03	--	6.00E-03	--	--	1.00E+00	5.40E-01	--	6.00E-03	--
Toluene	--	1.00E+00	--	--	8.00E-02	--	--	1.00E+00	--	--	8.00E-02	--
Tri-n-butyltin	--	1.00E+00	--	--	3.00E-04	--	--	1.00E+00	--	--	3.00E-04	--
Trichlorobenzene, 1,2,3-	--	1.00E+00	--	--	8.00E-04	--	--	1.00E+00	--	--	8.00E-04	--
Trichloroethane, 1,1,1-	--	1.00E+00	--	--	2.00E+00	--	--	1.00E+00	--	--	2.00E+00	--
Trichlorofluoromethane	--	1.00E+00	--	--	3.00E-01	--	--	1.00E+00	--	--	3.00E-01	--

Table A-4b. USEPA RSLs and DTSC-SLs for a Commercial/Industrial Receptor Exposed to Soil via Dermal Contact

Description	Variable	USEPA Value	DTSC Value	
Dermal Soil Absorption Factor[a]	ABS_d[a]	chemical-specific		unitless
Soil-to-Skin Adherence Factor, worker	AF_w	0.12	0.2	mg/cm^2-day
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, adult	$AT_{nc,w}$	25	25	yrs
Body Weight, adult	BW_a	80	80	kg
Conversion Factor	CF_d	1E-06	1E-06	kg/mg
COPC Concentration in Soil	C_{soil}	chemical-specific		mg/kg
Fraction of EV in Contact with Soil, worker	EC_w	1	1	unitless
Exposure Duration, worker	ED_w	25	25	yrs
Exposure Frequency, worker	EF_w	250	250	days/yr
Event Frequency, worker	EV_w	1	1	events/day
Oral Reference Dose Adjusted for GI Absorption	RfD_d	chemical-specific		mg/kg-day
(Regional) Screening Level, dermal	$(R)SL_D$	derived herein		mg/kg
Exposed Body Surface Area, worker	SA_w	3527	6032	cm^2
Oral Slope Factor Adjusted for GI Absorption	SF_d	chemical-specific		$(mg/kg\text{-}day)^{-1}$
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless

Equations:

Carcinogens:

$$(R)SL_D = \frac{TR \times AT_c \times 365\frac{days}{year} \times BW_a}{EF_w \times ED_w \times EV_r \times EC_r \times SF_D \times SA_w \times AF_w \times ABS_d \times CF_d}$$

Noncarcinogens:

$$(R)SL_D = \frac{THQ \times AT_{nc,w} \times 365\frac{days}{year} \times BW_a}{EF_w \times ED_w \times EV_r \times EC_r \times \frac{1}{RfD_D} \times SA_w \times AF_w \times ABS_d \times CF_d}$$

	Commercial/Industrial USEPA RSL_D						Commercial/Industrial DTSC-SL_D					
	ABS_d[a]	**GI Absorption**	**SF_d**	**Cancer**	**RfD_d**	**Noncancer**	**ABS_d**[a]	**GI Absorption**	**SF_d**	**Cancer**	**RfD_d**	**Noncancer**
Analyte	(unitless)	(unitless)	$(mg/kg\text{-}day)^{-1}$	(mg/kg)	(mg/kg-day)	(mg/kg)	(unitless)	(unitless)	$(mg/kg\text{-}day)^{-1}$	(mg/kg)	(mg/kg-day)	(mg/kg)
Trichlorophenol, 2,4,6-	1.00E-01	1.00E+00	1.10E-02	7.02E+02	1.00E-03	2.76E+03	1.00E-01	1.00E+00	7.00E-02	3.87E+01	1.00E-03	9.68E+02
Trichloropropane, 1,1,2-	--	1.00E+00	--	--	5.00E-03	--	--	1.00E+00	--	--	5.00E-03	--
Trichloropropane, 1,2,3-	--	1.00E+00	3.00E+01	--	4.00E-03	--	--	1.00E+00	3.00E+01	--	4.00E-03	--
Trimethylbenzene, 1,3,5-	--	1.00E+00	--	--	1.00E-02	--	--	1.00E+00	--	--	1.00E-02	--
Trimethylpentene, 2,4,4-	--	1.00E+00	--	--	1.00E-02	--	--	1.00E+00	--	--	1.00E-02	--
Vanadium and Compounds	--	2.60E-02	--	--	1.31E-04	--	1.00E-02	2.60E-02	--	--	1.31E-04	1.27E+03
Vinyl Chloride	--	1.00E+00	7.20E-01	--	3.00E-03	--	--	1.00E+00	2.70E-01	--	3.00E-03	--
Additional Analytes												
Beryllium Sulfate	--	7.00E-03	--	--	1.40E-05	--	1.00E-02	1.00E+00	--	--	2.00E-04	1.94E+03
Dichlorobenzene, 1,3-	--	1.00E+00	--	--	--	--	--	1.00E+00	--	--	3.00E-02	--
Methylcyclohexane	--	1.00E+00	--	--	--	--	--	1.00E+00	--	--	--	--

"--" = no value

Table A-5. Derivation of Inhalation Factors for Inhalation Exposures to Volatile Organic Compounds

Description:	Variable	USEPA Value	DTSC Value	Units
Unit conversion factor	CF_v	1.00E+03	1.00E+03	m^2/cm^2
Apparent Diffusivity	D_A	derived		cm^2/s
Diffusivity in air	D_i	chemical-specific		cm^2/s
Diffusivity in water	D_w	chemical-specific		cm^2/s
Default organic-carbon content	F_{OC}	0.006	0.006	g/g
Henry's law constant	H'	chemical-specific		dimensionless
Soil-water partition coefficient for organics: $Kd=K_{OC}\times F_{OC}$	K_d	chemical-specific		cm^3/g
Soil-organic carbon partition coefficient	K_{OC}	chemical-specific		cm^3/g
Total soil porosity	n	0.43	0.43	$L_{porespace}/L_{soil}$
Inverse of the mean concentration at the center of a 0.5-acre square source in Los Angeles	Q/C_{vol}	68.18	68.18	g/m^2-s per kg/m^3
Dry soil bulk density	ρ_b	1.5	1.5	g/cm^3
Air-filled soil porosity	θ_a	0.28	0.28	L_{air}/L_{soil}
Water-filled soil porosity	θ_w	0.15	0.15	L_{water}/L_{soil}
Inhalation exposure interval, resident	$T_{resident}$	8.20E+08	8.20E+08	seconds
Inhalation exposure interval, worker	T_{worker}	8.20E+08	8.20E+08	seconds
Volatilization Factor for soil	VFs	derived		m^3/kg

VF Derivation

$$VFs = Q/C_{vol} \times \frac{(3.14 \times D_A \times T)^{1/2}}{(2 \times \rho_b \times D_A)} \times CF_v$$

based on:

$$D_A = \frac{\left[\left(\theta_a{}^{10/3} D_i H' + \theta_w{}^{10/3} D_w\right)/n^2\right]}{\rho_B K_d + \theta_w + \theta_a H'}$$

Analyte	D_i (cm^2/s)	Reference	D_w (cm^2/s)	Reference	H' (dimensionless)	Reference	K_{OC} (cm^3/g)	Reference	USEPA Factors K_d (cm^3/g)	USEPA Factors D_A (cm^2/s)	USEPA Factors $VF_{resident}$ m^3/kg	USEPA Factors VF_{worker} m^3/kg	DTSC-Modified Factors K_d (cm^3/g)	DTSC-Modified Factors D_A (cm^2/s)	DTSC-Modified Factors $VF_{resident}$ m^3/kg	DTSC-Modified Factors VF_{worker} m^3/kg
USEPA RSL Analytes																
Acrylonitrile	1.14E-01	RSLs	1.23E-05	RSLs	5.64E-03	RSLs	8.51E+00	RSLs	5.11E-02	2.19E-04	7.79E+03	7.79E+03	5.11E-02	2.19E-04	7.79E+03	7.79E+03
Benzaldehyde	7.44E-02	RSLs	9.46E-06	RSLs	1.09E-03	RSLs	1.11E+01	RSLs	6.65E-02	2.56E-05	2.28E+04	2.28E+04	6.65E-02	2.56E-05	2.28E+04	2.28E+04
Benzene	8.95E-02	RSLs	1.03E-05	RSLs	2.27E-01	RSLs	1.46E+02	RSLs	8.75E-01	1.03E-03	3.59E+03	3.59E+03	8.75E-01	1.03E-03	3.59E+03	3.59E+03
Benzenethiol	7.29E-02	RSLs	9.45E-06	RSLs	1.37E-02	RSLs	2.34E+02	RSLs	1.40E+00	3.44E-05	1.97E+04	1.97E+04	1.40E+00	3.44E-05	1.97E+04	1.97E+04
Bromodichloromethane	5.63E-02	RSLs	1.07E-05	RSLs	8.67E-02	RSLs	3.18E+01	RSLs	1.91E-01	8.23E-04	4.02E+03	4.02E+03	1.91E-01	8.23E-04	4.02E+03	4.02E+03
Bromoform	3.57E-02	RSLs	1.04E-05	RSLs	2.19E-02	RSLs	3.18E+01	RSLs	1.91E-01	1.37E-04	9.84E+03	9.84E+03	1.91E-01	1.37E-04	9.84E+03	9.84E+03
Butadiene, 1,3-	1.00E-01	RSLs	1.03E-05	RSLs	3.01E+00	RSLs	3.96E+01	RSLs	2.38E-01	1.74E-02	8.75E+02	8.75E+02	2.38E-01	1.74E-02	8.75E+02	8.75E+02
Butanol, N-	9.00E-02	RSLs	1.01E-05	RSLs	3.60E-04	RSLs	3.47E+00	RSLs	2.08E-02	1.44E-05	3.04E+04	3.04E+04	2.08E-02	1.44E-05	3.04E+04	3.04E+04
Butylbenzene, n-	5.28E-02	RSLs	7.33E-06	RSLs	6.50E-01	RSLs	1.48E+03	RSLs	8.89E+00	1.95E-04	8.26E+03	8.26E+03	8.89E+00	1.95E-04	8.26E+03	8.26E+03
Butylbenzene, sec-	5.28E-02	RSLs	7.34E-06	RSLs	7.20E-01	RSLs	1.33E+03	RSLs	7.99E+00	2.39E-04	7.45E+03	7.45E+03	7.99E+00	2.39E-04	7.45E+03	7.45E+03
Butylbenzene, tert-	5.30E-02	RSLs	7.37E-06	RSLs	5.40E-01	RSLs	1.00E+03	RSLs	6.01E+00	2.38E-04	7.47E+03	7.47E+03	6.01E+00	2.38E-04	7.47E+03	7.47E+03
Carbon Tetrachloride	5.71E-02	RSLs	9.78E-06	RSLs	1.13E+00	RSLs	4.39E+01	RSLs	2.63E-01	5.82E-03	1.51E+03	1.51E+03	2.63E-01	5.82E-03	1.51E+03	1.51E+03
Chlordane	2.14E-02	RSLs	5.43E-06	RSLs	2.87E-03	RSLs	3.38E+04	RSLs	2.03E+02	1.59E-08	9.14E+05	9.14E+05	2.03E+02	1.59E-08	9.14E+05	9.14E+05
Chloroacetaldehyde, 2-	1.02E-01	RSLs	1.23E-05	RSLs	9.77E-04	RSLs	1.00E+00	RSLs	6.00E-03	4.91E-05	1.65E+04	1.65E+04	6.00E-03	4.91E-05	1.65E+04	1.65E+04
Chlorobutane, 1-	7.84E-02	RSLs	9.33E-06	RSLs	6.83E-01	RSLs	7.22E+01	RSLs	4.33E-01	4.20E-03	1.78E+03	1.78E+03	4.33E-01	4.20E-03	1.78E+03	1.78E+03
Chlorotoluene, o-	6.29E-02	RSLs	8.72E-06	RSLs	1.46E-01	RSLs	3.83E+02	RSLs	2.30E+00	1.96E-04	8.23E+03	8.23E+03	2.30E+00	1.96E-04	8.23E+03	8.23E+03
Chlorotoluene, p-	6.26E-02	RSLs	8.66E-06	RSLs	1.79E-01	RSLs	3.75E+02	RSLs	2.25E+00	2.43E-04	7.39E+03	7.39E+03	2.25E+00	2.43E-04	7.39E+03	7.39E+03
Crotonaldehyde, trans-	9.59E-02	RSLs	1.08E-05	RSLs	7.93E-04	RSLs	1.79E+00	RSLs	1.08E-02	3.62E-05	1.92E+04	1.92E+04	1.08E-02	3.62E-05	1.92E+04	1.92E+04
Cyanides																
~Cyanogen	1.24E-01	RSLs	1.38E-05	RSLs	2.21E-01	RSLs	0.00E+00	RSLs	0.00E+00	1.00E-02	1.15E+03	1.15E+03	0.00E+00	1.00E-02	1.15E+03	1.15E+03
~Cyanogen Bromide	9.84E-02	RSLs	1.41E-05	RSLs	1.00E+00	RSLs	0.00E+00	RSLs	0.00E+00	1.78E-02	8.65E+02	8.65E+02	0.00E+00	1.78E-02	8.65E+02	8.65E+02
~Cyanogen Chloride	1.21E-01	RSLs	1.42E-05	RSLs	7.94E-02	RSLs	0.00E+00	RSLs	0.00E+00	4.32E-03	1.75E+03	1.75E+03	0.00E+00	4.32E-03	1.75E+03	1.75E+03
Dibromobenzene, 1,3-	3.12E-02	RSLs	8.55E-06	RSLs	5.07E-02	RSLs	3.75E+02	RSLs	2.25E+00	3.47E-05	1.96E+04	1.96E+04	2.25E+00	3.47E-05	1.96E+04	1.96E+04
Dibromobenzene, 1,4-	3.33E-02	RSLs	9.34E-06	RSLs	3.65E-02	RSLs	3.75E+02	RSLs	2.25E+00	2.67E-05	2.23E+04	2.23E+04	2.25E+00	2.67E-05	2.23E+04	2.23E+04
Dibromochloromethane	3.66E-02	RSLs	1.06E-05	RSLs	3.20E-02	RSLs	3.18E+01	RSLs	1.91E-01	2.05E-04	8.06E+03	8.06E+03	1.91E-01	2.05E-04	8.06E+03	8.06E+03
Dibromoethane, 1,2-	4.30E-02	RSLs	1.04E-05	RSLs	2.66E-02	RSLs	3.96E+01	RSLs	2.38E-01	1.73E-04	8.76E+03	8.76E+03	2.38E-01	1.73E-04	8.76E+03	8.76E+03
Dichloroethane, 1,1-	8.36E-02	RSLs	1.06E-05	RSLs	2.30E-01	RSLs	3.18E+01	RSLs	1.91E-01	2.98E-03	2.11E+03	2.11E+03	1.91E-01	2.98E-03	2.11E+03	2.11E+03
Dichloroethylene, 1,2-cis-	8.84E-02	RSLs	1.13E-05	RSLs	1.67E-01	RSLs	3.96E+01	RSLs	2.38E-01	2.07E-03	2.53E+03	2.53E+03	2.38E-01	2.07E-03	2.53E+03	2.53E+03
Dichloroethylene, 1,2-trans-	8.76E-02	RSLs	1.12E-05	RSLs	3.84E-01	RSLs	3.96E+01	RSLs	2.38E-01	4.25E-03	1.77E+03	1.77E+03	2.38E-01	4.25E-03	1.77E+03	1.77E+03
Dichloropropane, 1,3-	7.39E-02	RSLs	9.82E-06	RSLs	3.99E-02	RSLs	7.22E+01	RSLs	4.33E-01	2.83E-04	6.86E+03	6.86E+03	4.33E-01	2.83E-04	6.86E+03	6.86E+03
Dichloropropene, 1,3-	7.63E-02	RSLs	1.01E-05	RSLs	1.45E-01	RSLs	7.22E+01	RSLs	4.33E-01	1.02E-03	3.60E+03	3.60E+03	4.33E-01	1.02E-03	3.60E+03	3.60E+03
Dimethylaniline, N,N-	6.25E-02	RSLs	8.31E-06	RSLs	2.32E-03	RSLs	7.87E+01	RSLs	4.72E-01	1.32E-05	3.17E+04	3.17E+04	4.72E-01	1.32E-05	3.17E+04	3.17E+04
Epichlorohydrin	8.89E-02	RSLs	1.11E-05	RSLs	1.24E-03	RSLs	9.91E+00	RSLs	5.94E-02	3.63E-05	1.91E+04	1.91E+04	5.94E-02	3.63E-05	1.91E+04	1.91E+04
Ethyl Chloride (Chloroethane)	1.04E-01	RSLs	1.16E-05	RSLs	4.54E-01	RSLs	2.17E+01	RSLs	1.30E-01	7.74E-03	1.31E+03	1.31E+03	1.30E-01	7.74E-03	1.31E+03	1.31E+03
Ethyl Ether	8.52E-02	RSLs	9.36E-06	RSLs	5.03E-02	RSLs	9.70E+00	RSLs	5.82E-02	1.33E-03	3.17E+03	3.17E+03	5.82E-02	1.33E-03	3.17E+03	3.17E+03

Table A-5. Derivation of Inhalation Factors for Inhalation Exposures to Volatile Organic Compounds

Description:	Variable	USEPA Value	DTSC Value	Units
Unit conversion factor	CF_v	1.00E+03	1.00E+03	m^2/cm^2
Apparent Diffusivity	D_A	derived		cm^2/s
Diffusivity in air	D_i	chemical-specific		cm^2/s
Diffusivity in water	D_w	chemical-specific		cm^2/s
Default organic-carbon content	F_{OC}	0.006	0.006	g/g
Henry's law constant	H'	chemical-specific		dimensionless
Soil-water partition coefficient for organics: $Kd=K_{OC}\times F_{OC}$	K_d	chemical-specific		cm^3/g
Soil-organic carbon partition coefficient	K_{OC}	chemical-specific		cm^3/g
Total soil porosity	n	0.43	0.43	$L_{porespace}/L_{soil}$
Inverse of the mean concentration at the center of a 0.5-acre square source in Los Angeles	Q/C_{vol}	68.18	68.18	g/m^2-s per kg/m^3
Dry soil bulk density	ρ_b	1.5	1.5	g/cm^3
Air-filled soil porosity	θ_a	0.28	0.28	L_{air}/L_{soil}
Water-filled soil porosity	θ_w	0.15	0.15	L_{water}/L_{soil}
Inhalation exposure interval, resident	$T_{resident}$	8.20E+08	8.20E+08	seconds
Inhalation exposure interval, worker	T_{worker}	8.20E+08	8.20E+08	seconds
Volatilization Factor for soil	VFs	derived		m^3/kg

VF Derivation

$$VFs = Q/C_{vol} \times \frac{(3.14 \times D_A \times T)^{1/2}}{(2 \times \rho_b \times D_A)} \times CF_v$$

based on:

$$D_A = \frac{\left[\left(\theta_a{}^{10/3} D_i H' + \theta_w{}^{10/3} D_w\right)/n^2\right]}{\rho_B K_d + \theta_w + \theta_a H'}$$

Analyte	D_i (cm^2/s)	Reference	D_w (cm^2/s)	Reference	H' (dimensionless)	Reference	K_{OC} (cm^3/g)	Reference	USEPA Factors K_d (cm^3/g)	USEPA Factors D_A (cm^2/s)	USEPA Factors $VF_{resident}$ m^3/kg	USEPA Factors VF_{worker} m^3/kg	DTSC-Modified Factors K_d (cm^3/g)	DTSC-Modified Factors D_A (cm^2/s)	DTSC-Modified Factors $VF_{resident}$ m^3/kg	DTSC-Modified Factors VF_{worker} m^3/kg
Furans																
~Furan	1.03E-01	RSLs	1.17E-05	RSLs	2.21E-01	RSLs	8.00E+01	RSLs	4.80E-01	1.89E-03	2.65E+03	2.65E+03	4.80E-01	1.89E-03	2.65E+03	2.65E+03
Hexachlorobutadiene	2.67E-02	RSLs	7.03E-06	RSLs	4.21E-01	RSLs	8.45E+02	RSLs	5.07E+00	1.11E-04	1.09E+04	1.09E+04	5.07E+00	1.11E-04	1.09E+04	1.09E+04
Isobutyl Alcohol	8.97E-02	RSLs	1.00E-05	RSLs	4.00E-04	RSLs	2.92E+00	RSLs	1.75E-02	1.63E-05	2.85E+04	2.85E+04	1.75E-02	1.63E-05	2.85E+04	2.85E+04
Lead Compounds																
~Tetraethyl Lead	2.46E-02	RSLs	6.40E-06	RSLs	2.32E+01	RSLs	6.48E+02	RSLs	3.89E+00	3.56E-03	1.93E+03	1.93E+03	3.89E+00	3.56E-03	1.93E+03	1.93E+03
Lewisite	3.28E-02	RSLs	9.06E-06	RSLs	8.91E-03	RSLs	1.11E+02	RSLs	6.64E-01	1.99E-05	2.59E+04	2.59E+04	6.64E-01	1.99E-05	2.59E+04	2.59E+04
Mercury Compounds																
~Mercury (elemental)	3.07E-02	RSLs	6.30E-06	RSLs	3.53E-01	RSLs	0.00E+00	RSLs	5.20E+01	1.07E-05	3.52E+04	3.52E+04	5.20E+01	1.07E-05	3.52E+04	3.52E+04
Methyl Acetate	9.58E-02	RSLs	1.10E-05	RSLs	4.70E-03	RSLs	3.06E+00	RSLs	1.84E-02	1.96E-04	8.23E+03	8.23E+03	1.84E-02	1.96E-04	8.23E+03	8.23E+03
Methylene Chloride	9.99E-02	RSLs	1.25E-05	RSLs	1.33E-01	RSLs	2.17E+01	RSLs	1.30E-01	2.70E-03	2.22E+03	2.22E+03	1.30E-01	2.70E-03	2.22E+03	2.22E+03
Methylstyrene, Alpha-	6.29E-02	RSLs	8.19E-06	RSLs	1.04E-01	RSLs	6.98E+02	RSLs	4.19E+00	7.89E-05	1.30E+04	1.30E+04	4.19E+00	7.89E-05	1.30E+04	1.30E+04
Mineral oils	3.62E-02	RSLs	6.43E-06	RSLs	3.35E+02	RSLs	4.82E+03	RSLs	2.89E+01	6.86E-03	1.39E+03	1.39E+03	2.89E+01	6.86E-03	1.39E+03	1.39E+03
Pentachloroethane	3.15E-02	RSLs	8.57E-06	RSLs	7.93E-02	RSLs	1.36E+02	RSLs	8.17E-01	1.39E-04	9.78E+03	9.78E+03	8.17E-01	1.39E-04	9.78E+03	9.78E+03
Phosphorus, White	2.19E-01	RSLs	2.77E-05	RSLs	8.63E-02	RSLs	0.00E+00	RSLs	3.50E+00	2.71E-04	7.00E+03	7.00E+03	3.50E+00	2.71E-04	7.00E+03	7.00E+03
Phthalates																
~Dimethylterephthalate	2.85E-02	RSLs	6.72E-06	RSLs	5.48E-03	RSLs	3.10E+01	RSLs	1.86E-01	2.84E-05	2.16E+04	2.16E+04	1.86E-01	2.84E-05	2.16E+04	2.16E+04
Tetrachloroethane, 1,1,1,2-	4.82E-02	RSLs	9.10E-06	RSLs	1.02E-01	RSLs	8.60E+01	RSLs	5.16E-01	4.02E-04	5.75E+03	5.75E+03	5.16E-01	4.02E-04	5.75E+03	5.75E+03
Tetrachloroethane, 1,1,2,2-	4.89E-02	RSLs	9.29E-06	RSLs	1.50E-02	RSLs	9.49E+01	RSLs	5.70E-01	5.66E-05	1.53E+04	1.53E+04	5.70E-01	5.66E-05	1.53E+04	1.53E+04
Tetrachloroethylene	5.05E-02	RSLs	9.46E-06	RSLs	7.24E-01	RSLs	9.49E+01	RSLs	5.70E-01	2.35E-03	2.38E+03	2.38E+03	5.70E-01	2.35E-03	2.38E+03	2.38E+03
Toluene	7.78E-02	RSLs	9.20E-06	RSLs	2.72E-01	RSLs	2.34E+02	RSLs	1.40E+00	7.04E-04	4.35E+03	4.35E+03	1.40E+00	7.04E-04	4.35E+03	4.35E+03
Tri-n-butyltin	2.15E-02	RSLs	5.35E-06	RSLs	6.22E+01	RSLs	8.09E+03	RSLs	4.85E+01	1.15E-03	3.40E+03	3.40E+03	4.85E+01	1.15E-03	3.40E+03	3.40E+03
Trichlorobenzene, 1,2,3-	3.95E-02	RSLs	8.38E-06	RSLs	5.11E-02	RSLs	1.38E+03	RSLs	8.30E+00	1.25E-05	3.27E+04	3.27E+04	8.30E+00	1.25E-05	3.27E+04	3.27E+04
Trichloroethane, 1,1,1-	6.48E-02	RSLs	9.60E-06	RSLs	7.03E-01	RSLs	4.39E+01	RSLs	2.63E-01	4.77E-03	1.67E+03	1.67E+03	2.63E-01	4.77E-03	1.67E+03	1.67E+03
Trichlorofluoromethane	6.54E-02	RSLs	1.00E-05	RSLs	3.97E+00	RSLs	4.39E+01	RSLs	2.63E-01	1.22E-02	1.05E+03	1.05E+03	2.63E-01	1.22E-02	1.05E+03	1.05E+03
Trichloropropane, 1,1,2-	5.72E-02	RSLs	9.17E-06	RSLs	1.30E-02	RSLs	9.49E+01	RSLs	5.70E-01	5.72E-05	1.53E+04	1.53E+04	5.70E-01	5.72E-05	1.53E+04	1.53E+04
Trichloropropane, 1,2,3-	5.75E-02	RSLs	9.24E-06	RSLs	1.40E-02	RSLs	1.16E+02	RSLs	6.95E-01	5.24E-05	1.59E+04	1.59E+04	6.95E-01	5.24E-05	1.59E+04	1.59E+04
Trimethylbenzene, 1,3,5-	6.02E-02	RSLs	7.84E-06	RSLs	3.59E-01	RSLs	6.02E+02	RSLs	3.61E+00	2.96E-04	6.70E+03	6.70E+03	3.61E+00	2.96E-04	6.70E+03	6.70E+03
Trimethylpentene, 2,4,4-	5.95E-02	RSLs	7.31E-06	RSLs	3.05E+01	RSLs	2.40E+02	RSLs	1.44E+00	1.30E-02	1.01E+03	1.01E+03	1.44E+00	1.30E-02	1.01E+03	1.01E+03
Vinyl Chloride	1.07E-01	RSLs	1.20E-05	RSLs	1.14E+00	RSLs	2.17E+01	RSLs	1.30E-01	1.42E-02	9.66E+02	9.66E+02	1.30E-01	1.42E-02	9.66E+02	9.66E+02
Additional Analytes																
Dichlorobenzene, 1,3-	6.82E-02	estimated	7.97E-06	estimated	1.08E-01	EPISuite v4.11	2.58E+00	EPISuite v4.11	1.55E-02	2.80E-03	2.18E+03	2.18E+03	1.55E-02	2.80E-03	2.18E+03	2.18E+03
Methylcyclohexane	8.93E-02	estimated	1.04E-05	estimated	1.76E+01	EPISuite v4.11	2.34E+02	EPISuite v4.11	1.40E+00	1.70E-02	8.85E+02	8.85E+02	1.40E+00	1.70E-02	8.85E+02	8.85E+02

"--" = no value

Table A-6a. USEPA RSLs and DTSC-SLs for a Residential Receptor Exposed to Compounds from Soil via Inhalation

Description	Variable	USEPA Value	DTSC Value	Units
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	yrs
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	yrs
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	yrs
Age-dependent Adjustment Factor, 16-30	$ADAF_{16-30}$	1	1	yrs
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
Averaging Time, noncarcinogens, resident	$AT_{nc,r}$	26	26	yrs
Carcinogenic adjustment factor, inhalation	CAF_I	0.756	0.756	dimensionless
Conversion Factor	CF_i	1.0E+03	1.0E+03	µg/mg
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-30	ED_{16-30}	10	10	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Duration, resident	ED_r	26	26	yrs
Exposure Frequency	EF_r	350	350	days/yr
Exposure Time	ET_r	24	24	hours/day
Inhalation Unit-Risk Factor	IUR	chemical-specific		$(\mu g/m^3)^{-1}$
Mutagenic adjustment factor, inhalation	MAF_I	0.244	0.244	dimensionless
Particulate emission factor (non-VOCs)	PEF	1.359E+09	1.360E+09	m^3/kg
Inhalation Reference Concentration	RfC	chemical-specific		$\mu g/m^3$
(Regional) Screening Level, inhalation	$(R)SL_{inh}$	derived herein		mg/kg
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless
Volatilization Factor for VOCs (Table A-5)	$VF_{resident}$	chemical-specific		m^3/kg

Equations

Cancer Risk:

Carcinogens:

$$(R)SL_{inh} = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times CF_I \times EF_r \times \left(\frac{1}{VF_{resident} \text{ or } PEF}\right) \times ED_r \times ET_r}$$

Mutagens:

$$(R)SL_{inh} = \frac{TR \times \left(AT_c \times 365\frac{days}{year} \times 24\frac{hour}{day}\right)}{EF_r \times ET_r \times CF_I \times \begin{pmatrix} ED_{0-2} \times IUR \times ADAF_{0-2} + ED_{2-6} \times IUR \times ADAF_{2-6} + \\ ED_{6-16} \times IUR \times ADAF_{6-16} + ED_{16-26} \times IUR \times ADAF_{16-26} \end{pmatrix} \times \left(\frac{1}{VF_{resident} \text{ or } PEF}\right)}$$

Trichloroethene:

$$(R)SL_{inh} = \frac{TR \times \left(AT_c \times 365\frac{days}{year} \times 24\frac{hour}{day}\right)}{IUR \times \left(\frac{1}{VF_{resident} \text{ or } PEF}\right) \times CF_I \times \left\{[CAF_I \times ED_r \times EF_r \times ET_r] + \left[MAF_I \times \begin{pmatrix} ED_{0-2} \times EF_r \times ET_r \times ADAF_{0-2} + ED_{2-6} \times EF_r \times ET_r \times ADAF_{2-6} + \\ ED_{6-16} \times EF_r \times ET_r \times ADAF_{6-16} + ED_{16-26} \times EF_r \times ET_r \times ADAF_{16-26} \end{pmatrix}\right]\right\}}$$

Vinyl Chloride:

$$(R)SL_{inh} = \frac{TR}{\left(\frac{IUR \times EF_r \times ED_r \times ET_r \times \frac{1\ day}{24\ hour} \times CF_I}{AT_c \times 365\frac{day}{year} \times VF_{resident}} + \left[\frac{IUR}{VF_{resident}} \times CF_I\right]\right)}$$

Noncancer Hazard:

$$(R)SL_{inh} = \frac{THQ \times AT_{nc,c} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_r \times ED_c \times ET_r \times \frac{1}{RfC} \times \left(\frac{1}{VF_{resident} \text{ or } PEF}\right) \times CF_i}$$

DTSC, Cadmium - noncarcinogenic hazard:

$$SL_{inh-Cd} = \frac{THQ \times AT_{nc,26-yr\ adult} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_r \times ED_{26-yr\ adult} \times ET_r \times \frac{1}{RfC} \times \frac{1}{PEF} \times CF_i}$$

		Residential USEPA RSL_{inh}					Residential DTSC-SL_{inh}				
Analyte	**Mutagen?**	**$VF_{resident}$ or PEF** m^3/kg	**IUR** $(\mu g/m^3)^{-1}$	**Cancer** (mg/kg)	**RfC** $(\mu g/m^3)$	**Noncancer** (mg/kg)	**$VF_{resident}$ or PEF** m^3/kg	**IUR** $(\mu g/m^3)^{-1}$	**Cancer** (mg/kg)	**RfC** $(\mu g/m^3)$	**Noncancer** (mg/kg)
USEPA RSL Analytes											
Acrylamide	M	1.36E+09	1.00E-04	1.38E+04	6.00E+00	8.51E+06	1.36E+09	1.30E-03	1.06E+03	6.00E+00	8.51E+06
Acrylonitrile		7.79E+03	6.80E-05	3.22E-01	2.00E+00	1.63E+01	7.79E+03	2.90E-04	7.55E-02	5.00E+00	4.06E+01
Arsenic, Inorganic		1.36E+09	4.30E-03	8.88E+02	1.50E-02	2.13E+04	1.36E+09	3.30E-03	1.16E+03	1.50E-02	2.13E+04
Benzaldehyde		2.28E+04	No Toxicity Value	--	No Toxicity Value	--	2.28E+04	No Toxicity Value	--	4.00E+02	9.51E+03
Benzene		3.59E+03	7.80E-06	1.29E+00	3.00E+01	1.12E+02	3.59E+03	2.90E-05	3.47E-01	3.00E+00	1.12E+01
Benzenethiol		1.97E+04	No Toxicity Value	--	No Toxicity Value	--	1.97E+04	No Toxicity Value	--	4.00E+00	8.21E+01
Benzidine	M	1.36E+09	6.70E-02	2.06E+01	No Toxicity Value	--	1.36E+09	1.40E-01	9.85E+00	No Toxicity Value	--
Beryllium and compounds		1.36E+09	2.40E-03	1.59E+03	2.00E-02	2.84E+04	1.36E+09	2.40E-03	1.59E+03	7.00E-03	9.93E+03
Bromodichloromethane		4.02E+03	3.70E-05	3.05E-01	No Toxicity Value	--	4.02E+03	3.70E-05	3.05E-01	8.00E+01	3.35E+02
Bromoform		9.84E+03	1.10E-06	2.51E+01	No Toxicity Value	--	9.84E+03	1.10E-06	2.51E+01	8.00E+01	8.21E+02
Butadiene, 1,3-		8.75E+02	3.00E-05	8.18E-02	2.00E+00	1.82E+00	8.75E+02	1.70E-04	1.44E-02	2.00E+00	1.82E+00
Butanol, N-		3.04E+04	No Toxicity Value	--	No Toxicity Value	--	3.04E+04	No Toxicity Value	--	4.00E+02	1.27E+04
Butylbenzene, n-		8.26E+03	No Toxicity Value	--	No Toxicity Value	--	8.26E+03	No Toxicity Value	--	2.00E+02	1.72E+03
Butylbenzene, sec-		7.45E+03	No Toxicity Value	--	No Toxicity Value	--	7.45E+03	No Toxicity Value	--	4.00E+02	3.11E+03
Butylbenzene, tert-		7.47E+03	No Toxicity Value	--	No Toxicity Value	--	7.47E+03	No Toxicity Value	--	4.00E+02	3.12E+03
Cadmium (Diet)		1.36E+09	1.80E-03	2.12E+03	1.00E-02	1.42E+04	1.36E+09	4.20E-03	9.09E+02	1.00E-02	1.42E+04
Carbon Tetrachloride		1.51E+03	6.00E-06	7.07E-01	1.00E+02	1.58E+02	1.51E+03	4.20E-05	1.01E-01	4.00E+01	6.31E+01
Chlordane		9.14E+05	1.00E-04	2.57E+01	7.00E-01	6.68E+02	9.14E+05	3.40E-04	7.55E+00	7.00E-01	6.68E+02
Chloro-2-methylaniline, 4-		1.36E+09	7.70E-05	4.96E+04	No Toxicity Value	--	1.36E+09	7.70E-05	4.96E+04	No Toxicity Value	--
Chloroacetaldehyde, 2-		1.65E+04	No Toxicity Value	--	No Toxicity Value	--	1.65E+04	6.75E-05	6.84E-01	No Toxicity Value	--
Chlorobutane, 1-		1.78E+03	No Toxicity Value	--	No Toxicity Value	--	1.78E+03	No Toxicity Value	--	1.60E+02	2.97E+02
Chlorotoluene, o-		8.23E+03	No Toxicity Value	--	No Toxicity Value	--	8.23E+03	No Toxicity Value	--	8.00E+01	6.87E+02
Chlorotoluene, p-		7.39E+03	No Toxicity Value	--	No Toxicity Value	--	7.39E+03	No Toxicity Value	--	8.00E+01	6.17E+02

Table A-6a. USEPA RSLs and DTSC-SLs for a Residential Receptor Exposed to Compounds from Soil via Inhalation

Description	Variable	USEPA Value	DTSC Value	Units
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	yrs
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	yrs
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	yrs
Age-dependent Adjustment Factor, 16-30	$ADAF_{16-30}$	1	1	yrs
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
Averaging Time, noncarcinogens, resident	$AT_{nc,r}$	26	26	yrs
Carcinogenic adjustment factor, inhalation	CAF_I	0.756	0.756	dimensionless
Conversion Factor	CF_i	1.0E+03	1.0E+03	µg/mg
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-30	ED_{16-30}	10	10	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Duration, resident	ED_r	26	26	yrs
Exposure Frequency	EF_r	350	350	days/yr
Exposure Time	ET_r	24	24	hours/day
Inhalation Unit-Risk Factor	IUR	chemical-specific		$(\mu g/m^3)^{-1}$
Mutagenic adjustment factor, inhalation	MAF_I	0.244	0.244	dimensionless
Particulate emission factor (non-VOCs)	PEF	1.359E+09	1.360E+09	m^3/kg
Inhalation Reference Concentration	RfC	chemical-specific		$\mu g/m^3$
(Regional) Screening Level, inhalation	$(R)SL_{inh}$	derived herein		mg/kg
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless
Volatilization Factor for VOCs (Table A-5)	$VF_{resident}$	chemical-specific		m^3/kg

Equations

Cancer Risk:

Carcinogens:

$$(R)SL_{inh} = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times CF_I \times EF_r \times \left(\frac{1}{VF_{resident} \text{ or } PEF}\right) \times ED_r \times ET_r}$$

Mutagens:

$$(R)SL_{inh} = \frac{TR \times \left(AT_c \times 365\frac{days}{year} \times 24\frac{hour}{day}\right)}{EF_r \times ET_r \times CF_I \times \begin{pmatrix} ED_{0-2} \times IUR \times ADAF_{0-2} + ED_{2-6} \times IUR \times ADAF_{2-6} + \\ ED_{6-16} \times IUR \times ADAF_{6-16} + ED_{16-26} \times IUR \times ADAF_{16-26} \end{pmatrix} \times \left(\frac{1}{VF_{resident} \text{ or } PEF}\right)}$$

Trichloroethene:

$$(R)SL_{inh} = \frac{TR \times \left(AT_c \times 365\frac{days}{year} \times 24\frac{hour}{day}\right)}{IUR \times \left(\frac{1}{VF_{resident} \text{ or } PEF}\right) \times CF_I \times \left\{[CAF_I \times ED_r \times EF_r \times ET_r] + \left[MAF_I \times \begin{pmatrix} ED_{0-2} \times EF_r \times ET_r \times ADAF_{0-2} + ED_{2-6} \times EF_r \times ET_r \times ADAF_{2-6} + \\ ED_{6-16} \times EF_r \times ET_r \times ADAF_{6-16} + ED_{16-26} \times EF_r \times ET_r \times ADAF_{16-26} \end{pmatrix}\right]\right\}}$$

Vinyl Chloride:

$$(R)SL_{inh} = \frac{TR}{\left(\frac{IUR \times EF_r \times ED_r \times ET_r \times \frac{1\ day}{24\ hour} \times CF_I}{AT_c \times 365\frac{day}{year} \times VF_{resident}} + \left[\frac{IUR}{VF_{resident}} \times CF_I\right]\right)}$$

Noncancer Hazard:

$$(R)SL_{inh} = \frac{THQ \times AT_{nc,c} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_r \times ED_c \times ET_r \times \frac{1}{RfC} \times \left(\frac{1}{VF_{resident} \text{ or } PEF}\right) \times CF_i}$$

DTSC, Cadmium - noncarcinogenic hazard:

$$SL_{inh-Cd} = \frac{THQ \times AT_{nc,26-yr\ adult} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_r \times ED_{26-yr\ adult} \times ET_r \times \frac{1}{RfC} \times \frac{1}{PEF} \times CF_i}$$

		Residential USEPA RSL_{inh}					Residential DTSC-SL_{inh}				
Analyte	**Mutagen?**	**$VF_{resident}$ or PEF** m^3/kg	**IUR** $(\mu g/m^3)^{-1}$	**Cancer** (mg/kg)	**RfC** $(\mu g/m^3)$	**Noncancer** (mg/kg)	**$VF_{resident}$ or PEF** m^3/kg	**IUR** $(\mu g/m^3)^{-1}$	**Cancer** (mg/kg)	**RfC** $(\mu g/m^3)$	**Noncancer** (mg/kg)
Chromium(III), Insoluble Salts		1.36E+09	No Toxicity Value	--	No Toxicity Value	--	1.36E+09	No Toxicity Value	--	No Toxicity Value	--
Crotonaldehyde, trans-		1.92E+04	No Toxicity Value	--	No Toxicity Value	--	1.92E+04	4.75E-04	1.13E-01	4.00E+00	8.00E+01
Cyanides											
~Cyanogen		1.15E+03	No Toxicity Value	--	No Toxicity Value	--	1.15E+03	No Toxicity Value	--	4.00E+00	4.81E+00
~Cyanogen Bromide		8.65E+02	No Toxicity Value	--	No Toxicity Value	--	8.65E+02	No Toxicity Value	--	3.60E+02	3.25E+02
~Cyanogen Chloride		1.75E+03	No Toxicity Value	--	No Toxicity Value	--	1.75E+03	No Toxicity Value	--	2.00E+02	3.66E+02
~Potassium Silver Cyanide		1.36E+09	No Toxicity Value	--	No Toxicity Value	--	1.36E+09	No Toxicity Value	--	No Toxicity Value	--
~Silver Cyanide		1.36E+09	No Toxicity Value	--	No Toxicity Value	--	1.36E+09	No Toxicity Value	--	No Toxicity Value	--
Dibromobenzene, 1,3-		1.96E+04	No Toxicity Value	--	No Toxicity Value	--	1.96E+04	No Toxicity Value	--	1.60E+00	3.27E+01
Dibromobenzene, 1,4-		2.23E+04	No Toxicity Value	--	No Toxicity Value	--	2.23E+04	No Toxicity Value	--	4.00E+01	9.31E+02
Dibromochloromethane		8.06E+03	No Toxicity Value	--	No Toxicity Value	--	8.06E+03	2.10E-05	1.08E+00	8.00E+01	6.72E+02
Dibromoethane, 1,2-		8.76E+03	6.00E-04	4.10E-02	9.00E+00	8.23E+01	8.76E+03	7.10E-05	3.47E-01	8.00E-01	7.31E+00
Dichlorobenzidine, 3,3'-		1.36E+09	3.40E-04	1.12E+04	No Toxicity Value	--	1.36E+09	3.40E-04	1.12E+04	No Toxicity Value	--
Dichloroethane, 1,1-		2.11E+03	1.60E-06	3.71E+00	No Toxicity Value	--	2.11E+03	1.60E-06	3.71E+00	8.00E+02	1.76E+03
Dichloroethylene, 1,2-cis-		2.53E+03	No Toxicity Value	--	No Toxicity Value	--	2.53E+03	No Toxicity Value	--	8.00E+00	2.11E+01
Dichloroethylene, 1,2-trans-		1.77E+03	No Toxicity Value	--	No Toxicity Value	--	1.77E+03	No Toxicity Value	--	8.00E+01	1.48E+02
Dichloropropane, 1,3-		6.86E+03	No Toxicity Value	--	No Toxicity Value	--	6.86E+03	No Toxicity Value	--	8.00E+01	5.72E+02
Dichloropropene, 1,3-		3.60E+03	4.00E-06	2.53E+00	2.00E+01	7.52E+01	3.60E+03	1.60E-05	6.32E-01	2.00E+01	7.52E+01
Dimethylaniline, N,N-		3.17E+04	No Toxicity Value	--	No Toxicity Value	--	3.17E+04	No Toxicity Value	--	8.00E+00	2.64E+02
Epichlorohydrin		1.91E+04	1.20E-06	4.48E+01	1.00E+00	2.00E+01	1.91E+04	2.30E-05	2.34E+00	3.00E+00	5.99E+01
Ethyl Chloride (Chloroethane)		1.31E+03	No Toxicity Value	--	1.00E+04	1.37E+04	1.31E+03	1.18E-06	3.13E+00	3.00E+04	4.10E+04
Ethyl Ether		3.17E+03	No Toxicity Value	--	No Toxicity Value	--	3.17E+03	No Toxicity Value	--	8.00E+02	2.64E+03
Furans											
~Furan		2.65E+03	No Toxicity Value	--	No Toxicity Value	--	2.65E+03	No Toxicity Value	--	4.00E+00	1.11E+01

Table A-6a. USEPA RSLs and DTSC-SLs for a Residential Receptor Exposed to Compounds from Soil via Inhalation

Description	Variable	USEPA Value	DTSC Value	Units
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	yrs
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	yrs
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	yrs
Age-dependent Adjustment Factor, 16-30	$ADAF_{16-30}$	1	1	yrs
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
Averaging Time, noncarcinogens, resident	$AT_{nc,r}$	26	26	yrs
Carcinogenic adjustment factor, inhalation	CAF_I	0.756	0.756	dimensionless
Conversion Factor	CF_i	1.0E+03	1.0E+03	µg/mg
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-30	ED_{16-30}	10	10	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Duration, resident	ED_r	26	26	yrs
Exposure Frequency	EF_r	350	350	days/yr
Exposure Time	ET_r	24	24	hours/day
Inhalation Unit-Risk Factor	IUR	chemical-specific		$(\mu g/m^3)^{-1}$
Mutagenic adjustment factor, inhalation	MAF_I	0.244	0.244	dimensionless
Particulate emission factor (non-VOCs)	PEF	1.359E+09	1.360E+09	m^3/kg
Inhalation Reference Concentration	RfC	chemical-specific		$\mu g/m^3$
(Regional) Screening Level, inhalation	$(R)SL_{inh}$	derived herein		mg/kg
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless
Volatilization Factor for VOCs (Table A-5)	$VF_{resident}$	chemical-specific		m^3/kg

Equations

Cancer Risk:

Carcinogens:

$$(R)SL_{inh} = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times CF_I \times EF_r \times \left(\frac{1}{VF_{resident} \text{ or } PEF}\right) \times ED_r \times ET_r}$$

Mutagens:

$$(R)SL_{inh} = \frac{TR \times \left(AT_c \times 365\frac{days}{year} \times 24\frac{hour}{day}\right)}{EF_r \times ET_r \times CF_I \times \begin{pmatrix} ED_{0-2} \times IUR \times ADAF_{0-2} + ED_{2-6} \times IUR \times ADAF_{2-6} + \\ ED_{6-16} \times IUR \times ADAF_{6-16} + ED_{16-26} \times IUR \times ADAF_{16-26} \end{pmatrix} \times \left(\frac{1}{VF_{resident} \text{ or } PEF}\right)}$$

Trichloroethene:

$$(R)SL_{inh} = \frac{TR \times \left(AT_c \times 365\frac{days}{year} \times 24\frac{hour}{day}\right)}{IUR \times \left(\frac{1}{VF_{resident} \text{ or } PEF}\right) \times CF_I \times \left\{[CAF_I \times ED_r \times EF_r \times ET_r] + \left[MAF_I \times \begin{pmatrix} ED_{0-2} \times EF_r \times ET_r \times ADAF_{0-2} + ED_{2-6} \times EF_r \times ET_r \times ADAF_{2-6} + \\ ED_{6-16} \times EF_r \times ET_r \times ADAF_{6-16} + ED_{16-26} \times EF_r \times ET_r \times ADAF_{16-26} \end{pmatrix}\right]\right\}}$$

Vinyl Chloride:

$$(R)SL_{inh} = \frac{TR}{\left(\frac{IUR \times EF_r \times ED_r \times ET_r \times \frac{1\ day}{24\ hour} \times CF_I}{AT_c \times 365\frac{day}{year} \times VF_{resident}} + \left[\frac{IUR}{VF_{resident}} \times CF_I\right]\right)}$$

Noncancer Hazard:

$$(R)SL_{inh} = \frac{THQ \times AT_{nc,c} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_r \times ED_c \times ET_r \times \frac{1}{RfC} \times \left(\frac{1}{VF_{resident} \text{ or } PEF}\right) \times CF_i}$$

DTSC, Cadmium - noncarcinogenic hazard:

$$SL_{inh-Cd} = \frac{THQ \times AT_{nc,26-yr\ adult} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_r \times ED_{26-yr\ adult} \times ET_r \times \frac{1}{RfC} \times \frac{1}{PEF} \times CF_i}$$

		Residential USEPA RSL_{inh}					Residential DTSC-SL_{inh}				
Analyte	**Mutagen?**	**$VF_{resident}$ or PEF** m^3/kg	**IUR** $(\mu g/m^3)^{-1}$	**Cancer** (mg/kg)	**RfC** $(\mu g/m^3)$	**Noncancer** (mg/kg)	**$VF_{resident}$ or PEF** m^3/kg	**IUR** $(\mu g/m^3)^{-1}$	**Cancer** (mg/kg)	**RfC** $(\mu g/m^3)$	**Noncancer** (mg/kg)
Hexachlorobutadiene		1.09E+04	2.20E-05	1.40E+00	No Toxicity Value	--	1.09E+04	2.20E-05	1.40E+00	4.00E+00	4.56E+01
Hexachlorocyclohexane, Technical		1.36E+09	5.10E-04	7.48E+03	No Toxicity Value	--	1.36E+09	1.10E-03	3.47E+03	No Toxicity Value	--
Isobutyl Alcohol		2.85E+04	No Toxicity Value	--	No Toxicity Value	--	2.85E+04	No Toxicity Value	--	1.20E+03	3.57E+04
Lead Compounds											
~Lead subacetate		1.36E+09	1.20E-05	3.18E+05	No Toxicity Value	--	1.36E+09	1.10E-05	3.47E+05	No Toxicity Value	--
~Tetraethyl Lead		1.93E+03	No Toxicity Value	--	No Toxicity Value	--	1.93E+03	No Toxicity Value	--	4.00E-04	8.06E-04
Lewisite		2.59E+04	No Toxicity Value	--	No Toxicity Value	--	2.59E+04	No Toxicity Value	--	2.00E-02	5.40E-01
Manganese (Non-diet)		1.36E+09	No Toxicity Value	--	5.00E-02	7.09E+04	1.36E+09	No Toxicity Value	--	9.00E-02	1.28E+05
Mercury Compounds											
~Mercuric Chloride (and other Mercury salts)		1.36E+09	No Toxicity Value	--	3.00E-01	4.25E+05	1.36E+09	No Toxicity Value	--	3.00E-02	4.25E+04
~Mercury (elemental)		3.52E+04	No Toxicity Value	--	3.00E-01	1.10E+01	3.52E+04	No Toxicity Value	--	3.00E-02	1.10E+00
Methyl Acetate		8.23E+03	No Toxicity Value	--	No Toxicity Value	--	8.23E+03	No Toxicity Value	--	4.00E+03	3.43E+04
Methylene Chloride	M	2.22E+03	1.00E-08	2.25E+02	6.00E+02	1.39E+03	2.22E+03	1.00E-06	2.25E+00	4.00E+02	9.27E+02
Methylene-bis(2-chloroaniline), 4,4'-	M	1.36E+09	4.30E-04	3.21E+03	No Toxicity Value	--	1.36E+09	4.30E-04	3.21E+03	No Toxicity Value	--
Methylstyrene, Alpha-		1.30E+04	No Toxicity Value	--	No Toxicity Value	--	1.30E+04	No Toxicity Value	--	2.80E+02	3.79E+03
Mineral oils		1.39E+03	No Toxicity Value	--	No Toxicity Value	--	1.39E+03	No Toxicity Value	--	1.20E+04	1.74E+04
Nickel Hydroxide		1.36E+09	2.60E-04	1.47E+04	1.40E-02	1.98E+04	1.36E+09	2.60E-04	1.47E+04	1.40E-02	1.99E+04
Nickel Oxide		1.36E+09	2.60E-04	1.47E+04	2.00E-02	2.84E+04	1.36E+09	2.60E-04	1.47E+04	2.00E-02	2.84E+04
Nickel Refinery Dust		1.36E+09	2.40E-04	1.59E+04	1.40E-02	1.98E+04	1.36E+09	2.60E-04	1.47E+04	1.40E-02	1.99E+04
Nickel Soluble Salts		1.36E+09	2.60E-04	1.47E+04	9.00E-02	1.28E+05	1.36E+09	2.60E-04	1.47E+04	1.40E-02	1.99E+04
Nickel Subsulfide		1.36E+09	4.80E-04	7.95E+03	1.40E-02	1.98E+04	1.36E+09	4.90E-04	7.79E+03	1.40E-02	1.99E+04
Pentachloroethane		9.78E+03	No Toxicity Value	--	No Toxicity Value	--	9.78E+03	2.25E-05	1.22E+00	No Toxicity Value	--
Phosphorus, White		7.00E+03	No Toxicity Value	--	No Toxicity Value	--	7.00E+03	No Toxicity Value	--	8.00E-02	5.84E-01

Table A-6a. USEPA RSLs and DTSC-SLs for a Residential Receptor Exposed to Compounds from Soil via Inhalation

Description	Variable	USEPA Value	DTSC Value	Units
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	yrs
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	yrs
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	yrs
Age-dependent Adjustment Factor, 16-30	$ADAF_{16-30}$	1	1	yrs
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
Averaging Time, noncarcinogens, resident	$AT_{nc,r}$	26	26	yrs
Carcinogenic adjustment factor, inhalation	CAF_I	0.756	0.756	dimensionless
Conversion Factor	CF_i	1.0E+03	1.0E+03	µg/mg
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-30	ED_{16-30}	10	10	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Duration, resident	ED_r	26	26	yrs
Exposure Frequency	EF_r	350	350	days/yr
Exposure Time	ET_r	24	24	hours/day
Inhalation Unit-Risk Factor	IUR	chemical-specific		$(\mu g/m^3)^{-1}$
Mutagenic adjustment factor, inhalation	MAF_I	0.244	0.244	dimensionless
Particulate emission factor (non-VOCs)	PEF	1.359E+09	1.360E+09	m^3/kg
Inhalation Reference Concentration	RfC	chemical-specific		$\mu g/m^3$
(Regional) Screening Level, inhalation	$(R)SL_{inh}$	derived herein		mg/kg
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless
Volatilization Factor for VOCs (Table A-5)	$VF_{resident}$	chemical-specific		m^3/kg

Equations

Cancer Risk:

Carcinogens:

$$(R)SL_{inh} = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times CF_I \times EF_r \times \left(\frac{1}{VF_{resident} \text{ or } PEF}\right) \times ED_r \times ET_r}$$

Mutagens:

$$(R)SL_{inh} = \frac{TR \times \left(AT_c \times 365\frac{days}{year} \times 24\frac{hour}{day}\right)}{EF_r \times ET_r \times CF_I \times \begin{pmatrix} ED_{0-2} \times IUR \times ADAF_{0-2} + ED_{2-6} \times IUR \times ADAF_{2-6} + \\ ED_{6-16} \times IUR \times ADAF_{6-16} + ED_{16-26} \times IUR \times ADAF_{16-26} \end{pmatrix} \times \left(\frac{1}{VF_{resident} \text{ or } PEF}\right)}$$

Trichloroethene:

$$(R)SL_{inh} = \frac{TR \times \left(AT_c \times 365\frac{days}{year} \times 24\frac{hour}{day}\right)}{IUR \times \left(\frac{1}{VF_{resident} \text{ or } PEF}\right) \times CF_I \times \left\{[CAF_I \times ED_r \times EF_r \times ET_r] + \left[MAF_I \times \begin{pmatrix} ED_{0-2} \times EF_r \times ET_r \times ADAF_{0-2} + ED_{2-6} \times EF_r \times ET_r \times ADAF_{2-6} + \\ ED_{6-16} \times EF_r \times ET_r \times ADAF_{6-16} + ED_{16-26} \times EF_r \times ET_r \times ADAF_{16-26} \end{pmatrix}\right]\right\}}$$

Vinyl Chloride:

$$(R)SL_{inh} = \frac{TR}{\left(\frac{IUR \times EF_r \times ED_r \times ET_r \times \frac{1\ day}{24\ hour} \times CF_I}{AT_c \times 365\frac{day}{year} \times VF_{resident}} + \left[\frac{IUR}{VF_{resident}} \times CF_I\right]\right)}$$

Noncancer Hazard:

$$(R)SL_{inh} = \frac{THQ \times AT_{nc,c} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_r \times ED_c \times ET_r \times \frac{1}{RfC} \times \left(\frac{1}{VF_{resident} \text{ or } PEF}\right) \times CF_i}$$

DTSC, Cadmium - noncarcinogenic hazard:

$$SL_{inh-Cd} = \frac{THQ \times AT_{nc,26-yr\ adult} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_r \times ED_{26-yr\ adult} \times ET_r \times \frac{1}{RfC} \times \frac{1}{PEF} \times CF_i}$$

		Residential USEPA RSL_{inh}					Residential DTSC-SL_{inh}				
Analyte	**Mutagen?**	**$VF_{resident}$ or PEF** m^3/kg	**IUR** $(\mu g/m^3)^{-1}$	**Cancer** (mg/kg)	**RfC** $(\mu g/m^3)$	**Noncancer** (mg/kg)	**$VF_{resident}$ or PEF** m^3/kg	**IUR** $(\mu g/m^3)^{-1}$	**Cancer** (mg/kg)	**RfC** $(\mu g/m^3)$	**Noncancer** (mg/kg)
Phthalates											
~Dimethylterephthalate		2.16E+04	No Toxicity Value	--	No Toxicity Value	--	2.16E+04	No Toxicity Value	--	4.00E+02	9.03E+03
Silver		1.36E+09	No Toxicity Value	--	No Toxicity Value	--	1.36E+09	No Toxicity Value	--	No Toxicity Value	--
Tetrachloroethane, 1,1,1,2-		5.75E+03	7.40E-06	2.18E+00	No Toxicity Value	--	5.75E+03	7.40E-06	2.18E+00	1.20E+02	7.20E+02
Tetrachloroethane, 1,1,2,2-		1.53E+04	5.80E-05	7.42E-01	No Toxicity Value	--	1.53E+04	5.80E-05	7.42E-01	8.00E+01	1.28E+03
Tetrachloroethylene		2.38E+03	2.60E-07	2.57E+01	4.00E+01	9.92E+01	2.38E+03	5.90E-06	1.13E+00	3.50E+01	8.68E+01
Toluene		4.35E+03	No Toxicity Value	--	5.00E+03	2.27E+04	4.35E+03	No Toxicity Value	--	3.00E+02	1.36E+03
Tri-n-butyltin		3.40E+03	No Toxicity Value	--	No Toxicity Value	--	3.40E+03	No Toxicity Value	--	1.20E+00	4.26E+00
Trichlorobenzene, 1,2,3-		3.27E+04	No Toxicity Value	--	No Toxicity Value	--	3.27E+04	No Toxicity Value	--	3.20E+00	1.09E+02
Trichloroethane, 1,1,1-		1.67E+03	No Toxicity Value	--	5.00E+03	8.70E+03	1.67E+03	No Toxicity Value	--	1.00E+03	1.74E+03
Trichlorofluoromethane		1.05E+03	No Toxicity Value	--	No Toxicity Value	--	1.05E+03	No Toxicity Value	--	1.20E+03	1.31E+03
Trichlorophenol, 2,4,6-		1.36E+09	3.10E-06	1.23E+06	No Toxicity Value	--	1.36E+09	2.00E-05	1.91E+05	No Toxicity Value	--
Trichloropropane, 1,1,2-		1.53E+04	No Toxicity Value	--	No Toxicity Value	--	1.53E+04	No Toxicity Value	--	2.00E+01	3.18E+02
Trichloropropane, 1,2,3-	M	1.59E+04	No Toxicity Value	--	3.00E-01	4.98E+00	1.59E+04	7.50E-03	2.15E-03	3.00E-01	4.98E+00
Trimethylbenzene, 1,3,5-		6.70E+03	No Toxicity Value	--	No Toxicity Value	--	6.70E+03	No Toxicity Value	--	4.00E+01	2.80E+02
Trimethylpentene, 2,4,4-		1.01E+03	No Toxicity Value	--	No Toxicity Value	--	1.01E+03	No Toxicity Value	--	4.00E+01	4.22E+01
Vanadium and Compounds		1.36E+09	No Toxicity Value	--	1.00E-01	1.42E+05	1.36E+09	No Toxicity Value	--	1.00E-01	1.42E+05
Vinyl Chloride	M (VC)	9.66E+02	4.40E-06	1.62E-01	1.00E+02	1.01E+02	9.66E+02	7.80E-05	9.13E-03	1.00E+02	1.01E+02
Additional Analytes											
Beryllium Sulfate		1.36E+09	2.40E-03	1.59E+03	2.00E-02	2.84E+04	1.36E+09	8.60E-01	4.44E+00	7.00E-03	9.93E+03
Dichlorobenzene, 1,3-		2.18E+03	No Toxicity Value	--	No Toxicity Value	--	2.18E+03	No Toxicity Value	--	1.20E+02	2.73E+02
Methylcyclohexane		8.85E+02	No Toxicity Value	--	No Toxicity Value	--	8.85E+02	No Toxicity Value	--	6.00E+03	5.54E+03

"--" = no value

Table A-6b. USEPA RSLs and DTSC-SLs for a Commercial Industrial Receptor Exposed to Compounds from Soil via Inhalation

Description	Variable	USEPA Value	DTSC Value	Units
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, worker	$AT_{nc,w}$	25	25	yrs
COPC Concentration in air	C_{air}	chemical-specific		µg/m^3
COPC Concentration in soil	C_{soil}	chemical-specific		mg/kg
Conversion Factor	CF_i	1.0E+03	1.0E+03	µg/mg
Exposure Duration, worker	ED_w	25	25	yrs
Exposure Frequency, worker	EF_w	250	250	days/yr
Exposure Time, worker	ET_w	8	8	hours/day
Inhalation Unit-Risk Factor	IUR	chemical-specific		(µg/m^3)$^{-1}$
Particulate emission factor (non-VOCs)	PEF	1.359E+09	1.360E+09	m^3/kg
Inhalation Reference Concentration	RfC	chemical-specific		µg/m^3
Regional screening level, inhalation	RSL_{inh}	chemical-specific		µg/m^3
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless
Volatilization Factor for VOCs (Table A-4)	VF_{worker}	chemical-specific		m^3/kg

Equations

Carcinogen:

$$RSL_{inh} = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_w \times ED_w \times ET_w \times IUR \times CF_I \times \left(\frac{1}{VF_{worker} \text{ or } PEF}\right)}$$

Noncarcinogen:

$$RSL_{inh} = \frac{THQ \times AT_w \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_w \times ED_w \times ET_w \times \frac{1}{RfC} \times CF_I \times \left(\frac{1}{VF_{worker} \text{ or } PEF}\right)}$$

	USEPA Commercial RSL_{inh}					DTSC-Modified Residential RSLinh				
Analyte	**VF_{worker} or PEF** m^3/kg	**IUR** (µg/m^3)$^{-1}$	**Cancer** (mg/kg)	**RfC** (µg/m^3)	**Noncancer** (mg/kg)	**VF_{worker} or PEF** m^3/kg	**IUR** (µg/m^3)$^{-1}$	**Cancer** (mg/kg)	**RfC** (µg/m^3)	**Noncancer** (mg/kg)
USEPA RSL Analytes										
Acrylamide	1.36E+09	1.00E-04	1.67E+05	6.00E+00	3.57E+07	1.36E+09	1.30E-03	1.28E+04	6.00E+00	3.57E+07
Acrylonitrile	7.79E+03	6.80E-05	1.41E+00	2.00E+00	6.83E+01	7.79E+03	2.90E-04	3.30E-01	5.00E+00	1.71E+02
Arsenic, Inorganic	1.36E+09	4.30E-03	3.88E+03	1.50E-02	8.93E+04	1.36E+09	3.30E-03	5.05E+03	1.50E-02	8.94E+04
Benzaldehyde	2.28E+04	No Toxicity Value	--	No Toxicity Value	--	2.28E+04	No Toxicity Value	--	4.00E+02	3.99E+04
Benzene	3.59E+03	7.80E-06	5.64E+00	3.00E+01	4.71E+02	3.59E+03	2.90E-05	1.52E+00	3.00E+00	4.71E+01
Benzenethiol	1.97E+04	No Toxicity Value	--	No Toxicity Value	--	1.97E+04	No Toxicity Value	--	4.00E+00	3.45E+02
Benzidine	1.36E+09	6.70E-02	2.49E+02	No Toxicity Value	--	1.36E+09	1.40E-01	1.19E+02	No Toxicity Value	--
Beryllium and compounds	1.36E+09	2.40E-03	6.95E+03	2.00E-02	1.19E+05	1.36E+09	2.40E-03	6.95E+03	7.00E-03	4.17E+04
Bromodichloromethane	4.02E+03	3.70E-05	1.33E+00	No Toxicity Value	--	4.02E+03	3.70E-05	1.33E+00	8.00E+01	1.41E+03
Bromoform	9.84E+03	1.10E-06	1.10E+02	No Toxicity Value	--	9.84E+03	1.10E-06	1.10E+02	8.00E+01	3.45E+03
Butadiene, 1,3-	8.75E+02	3.00E-05	3.58E-01	2.00E+00	7.66E+00	8.75E+02	1.70E-04	6.31E-02	2.00E+00	7.66E+00
Butanol, N-	3.04E+04	No Toxicity Value	--	No Toxicity Value	--	3.04E+04	No Toxicity Value	--	4.00E+02	5.32E+04
Butylbenzene, n-	8.26E+03	No Toxicity Value	--	No Toxicity Value	--	8.26E+03	No Toxicity Value	--	2.00E+02	7.23E+03
Butylbenzene, sec-	7.45E+03	No Toxicity Value	--	No Toxicity Value	--	7.45E+03	No Toxicity Value	--	4.00E+02	1.31E+04
Butylbenzene, tert-	7.47E+03	No Toxicity Value	--	No Toxicity Value	--	7.47E+03	No Toxicity Value	--	4.00E+02	1.31E+04
Cadmium (Diet)	1.36E+09	1.80E-03	9.26E+03	1.00E-02	5.95E+04	1.36E+09	4.20E-03	3.97E+03	1.00E-02	5.96E+04
Carbon Tetrachloride	1.51E+03	6.00E-06	3.09E+00	1.00E+02	6.62E+02	1.51E+03	4.20E-05	4.41E-01	4.00E+01	2.65E+02
Chlordane	9.14E+05	1.00E-04	1.12E+02	7.00E-01	2.80E+03	9.14E+05	3.40E-04	3.30E+01	7.00E-01	2.80E+03
Chloro-2-methylaniline, 4-	1.36E+09	7.70E-05	2.17E+05	No Toxicity Value	--	1.36E+09	7.70E-05	2.17E+05	No Toxicity Value	--
Chloroacetaldehyde, 2-	1.65E+04	No Toxicity Value	--	No Toxicity Value	--	1.65E+04	6.75E-05	2.99E+00	No Toxicity Value	--
Chlorobutane, 1-	1.78E+03	No Toxicity Value	--	No Toxicity Value	--	1.78E+03	No Toxicity Value	--	1.60E+02	1.25E+03
Chlorotoluene, o-	8.23E+03	No Toxicity Value	--	No Toxicity Value	--	8.23E+03	No Toxicity Value	--	8.00E+01	2.89E+03
Chlorotoluene, p-	7.39E+03	No Toxicity Value	--	No Toxicity Value	--	7.39E+03	No Toxicity Value	--	8.00E+01	2.59E+03

Table A-6b. USEPA RSLs and DTSC-SLs for a Commercial Industrial Receptor Exposed to Compounds from Soil via Inhalation

Description	Variable	USEPA Value	DTSC Value	Units
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, worker	$AT_{nc,w}$	25	25	yrs
COPC Concentration in air	C_{air}	chemical-specific		µg/m^3
COPC Concentration in soil	C_{soil}	chemical-specific		mg/kg
Conversion Factor	CF_i	1.0E+03	1.0E+03	µg/mg
Exposure Duration, worker	ED_w	25	25	yrs
Exposure Frequency, worker	EF_w	250	250	days/yr
Exposure Time, worker	ET_w	8	8	hours/day
Inhalation Unit-Risk Factor	IUR	chemical-specific		(µg/m^3)$^{-1}$
Particulate emission factor (non-VOCs)	PEF	1.359E+09	1.360E+09	m^3/kg
Inhalation Reference Concentration	RfC	chemical-specific		µg/m^3
Regional screening level, inhalation	RSL_{inh}	chemical-specific		µg/m^3
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless
Volatilization Factor for VOCs (Table A-4)	VF_{worker}	chemical-specific		m^3/kg

Equations

Carcinogen:

$$RSL_{inh} = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_w \times ED_w \times ET_w \times IUR \times CF_I \times \left(\frac{1}{VF_{worker} \text{ or } PEF}\right)}$$

Noncarcinogen:

$$RSL_{inh} = \frac{THQ \times AT_w \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_w \times ED_w \times ET_w \times \frac{1}{RfC} \times CF_I \times \left(\frac{1}{VF_{worker} \text{ or } PEF}\right)}$$

	USEPA Commercial RSL_{inh}					DTSC-Modified Residential RSLinh				
Analyte	**VF_{worker} or PEF** m^3/kg	**IUR** (µg/m^3)$^{-1}$	**Cancer** (mg/kg)	**RfC** (µg/m^3)	**Noncancer** (mg/kg)	**VF_{worker} or PEF** m^3/kg	**IUR** (µg/m^3)$^{-1}$	**Cancer** (mg/kg)	**RfC** (µg/m^3)	**Noncancer** (mg/kg)
Chromium(III), Insoluble Salts	1.36E+09	No Toxicity Value	--	No Toxicity Value	--	1.36E+09	No Toxicity Value	--	No Toxicity Value	--
Crotonaldehyde, trans-	1.92E+04	No Toxicity Value	--	No Toxicity Value	--	1.92E+04	4.75E-04	4.95E-01	4.00E+00	3.36E+02
Cyanides										
~Cyanogen	1.15E+03	No Toxicity Value	--	No Toxicity Value	--	1.15E+03	No Toxicity Value	--	4.00E+00	2.02E+01
~Cyanogen Bromide	8.65E+02	No Toxicity Value	--	No Toxicity Value	--	8.65E+02	No Toxicity Value	--	3.60E+02	1.36E+03
~Cyanogen Chloride	1.75E+03	No Toxicity Value	--	No Toxicity Value	--	1.75E+03	No Toxicity Value	--	2.00E+02	1.54E+03
~Potassium Silver Cyanide	1.36E+09	No Toxicity Value	--	No Toxicity Value	--	1.36E+09	No Toxicity Value	--	No Toxicity Value	--
~Silver Cyanide	1.36E+09	No Toxicity Value	--	No Toxicity Value	--	1.36E+09	No Toxicity Value	--	No Toxicity Value	--
Dibromobenzene, 1,3-	1.96E+04	No Toxicity Value	--	No Toxicity Value	--	1.96E+04	No Toxicity Value	--	1.60E+00	1.37E+02
Dibromobenzene, 1,4-	2.23E+04	No Toxicity Value	--	No Toxicity Value	--	2.23E+04	No Toxicity Value	--	4.00E+01	3.91E+03
Dibromochloromethane	8.06E+03	No Toxicity Value	--	No Toxicity Value	--	8.06E+03	2.10E-05	4.71E+00	8.00E+01	2.82E+03
Dibromoethane, 1,2-	8.76E+03	6.00E-04	1.79E-01	9.00E+00	3.46E+02	8.76E+03	7.10E-05	1.51E+00	8.00E-01	3.07E+01
Dichlorobenzidine, 3,3'-	1.36E+09	3.40E-04	4.90E+04	No Toxicity Value	--	1.36E+09	3.40E-04	4.91E+04	No Toxicity Value	--
Dichloroethane, 1,1-	2.11E+03	1.60E-06	1.62E+01	No Toxicity Value	--	2.11E+03	1.60E-06	1.62E+01	8.00E+02	7.40E+03
Dichloroethylene, 1,2-cis-	2.53E+03	No Toxicity Value	--	No Toxicity Value	--	2.53E+03	No Toxicity Value	--	8.00E+00	8.88E+01
Dichloroethylene, 1,2-trans-	1.77E+03	No Toxicity Value	--	No Toxicity Value	--	1.77E+03	No Toxicity Value	--	8.00E+01	6.20E+02
Dichloropropane, 1,3-	6.86E+03	No Toxicity Value	--	No Toxicity Value	--	6.86E+03	No Toxicity Value	--	8.00E+01	2.40E+03
Dichloropropene, 1,3-	3.60E+03	4.00E-06	1.11E+01	2.00E+01	3.16E+02	3.60E+03	1.60E-05	2.76E+00	2.00E+01	3.16E+02
Dimethylaniline, N,N-	3.17E+04	No Toxicity Value	--	No Toxicity Value	--	3.17E+04	No Toxicity Value	--	8.00E+00	1.11E+03
Epichlorohydrin	1.91E+04	1.20E-06	1.96E+02	1.00E+00	8.39E+01	1.91E+04	2.30E-05	1.02E+01	3.00E+00	2.52E+02
Ethyl Chloride (Chloroethane)	1.31E+03	No Toxicity Value	--	1.00E+04	5.74E+04	1.31E+03	1.18E-06	1.37E+01	3.00E+04	1.72E+05
Ethyl Ether	3.17E+03	No Toxicity Value	--	No Toxicity Value	--	3.17E+03	No Toxicity Value	--	8.00E+02	1.11E+04
Furans										
~Furan	2.65E+03	No Toxicity Value	--	No Toxicity Value	--	2.65E+03	No Toxicity Value	--	4.00E+00	4.65E+01

Table A-6b. USEPA RSLs and DTSC-SLs for a Commercial Industrial Receptor Exposed to Compounds from Soil via Inhalation

Description	Variable	USEPA Value	DTSC Value	Units
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, worker	$AT_{nc,w}$	25	25	yrs
COPC Concentration in air	C_{air}	chemical-specific		µg/m^3
COPC Concentration in soil	C_{soil}	chemical-specific		mg/kg
Conversion Factor	CF_i	1.0E+03	1.0E+03	µg/mg
Exposure Duration, worker	ED_w	25	25	yrs
Exposure Frequency, worker	EF_w	250	250	days/yr
Exposure Time, worker	ET_w	8	8	hours/day
Inhalation Unit-Risk Factor	IUR	chemical-specific		(µg/m^3)$^{-1}$
Particulate emission factor (non-VOCs)	PEF	1.359E+09	1.360E+09	m^3/kg
Inhalation Reference Concentration	RfC	chemical-specific		µg/m^3
Regional screening level, inhalation	RSL_{inh}	chemical-specific		µg/m^3
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless
Volatilization Factor for VOCs (Table A-4)	VF_{worker}	chemical-specific		m^3/kg

Equations

Carcinogen:

$$RSL_{inh} = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_w \times ED_w \times ET_w \times IUR \times CF_I \times \left(\frac{1}{VF_{worker} \text{ or } PEF}\right)}$$

Noncarcinogen:

$$RSL_{inh} = \frac{THQ \times AT_w \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_w \times ED_w \times ET_w \times \frac{1}{RfC} \times CF_I \times \left(\frac{1}{VF_{worker} \text{ or } PEF}\right)}$$

	USEPA Commercial RSL_{inh}					DTSC-Modified Residential RSLinh				
Analyte	**VF_{worker} or PEF** m^3/kg	**IUR** (µg/m^3)$^{-1}$	**Cancer** (mg/kg)	**RfC** (µg/m^3)	**Noncancer** (mg/kg)	**VF_{worker} or PEF** m^3/kg	**IUR** (µg/m^3)$^{-1}$	**Cancer** (mg/kg)	**RfC** (µg/m^3)	**Noncancer** (mg/kg)
Hexachlorobutadiene	1.09E+04	2.20E-05	6.10E+00	No Toxicity Value	--	1.09E+04	2.20E-05	6.10E+00	4.00E+00	1.92E+02
Hexachlorocyclohexane, Technical	1.36E+09	5.10E-04	3.27E+04	No Toxicity Value	--	1.36E+09	1.10E-03	1.52E+04	No Toxicity Value	--
Isobutyl Alcohol	2.85E+04	No Toxicity Value	--	No Toxicity Value	--	2.85E+04	No Toxicity Value	--	1.20E+03	1.50E+05
Lead Compounds										
~Lead subacetate	1.36E+09	1.20E-05	1.39E+06	No Toxicity Value	--	1.36E+09	1.10E-05	1.52E+06	No Toxicity Value	--
~Tetraethyl Lead	1.93E+03	No Toxicity Value	--	No Toxicity Value	--	1.93E+03	No Toxicity Value	--	4.00E-04	3.39E-03
Lewisite	2.59E+04	No Toxicity Value	--	No Toxicity Value	--	2.59E+04	No Toxicity Value	--	2.00E-02	2.27E+00
Manganese (Non-diet)	1.36E+09	No Toxicity Value	--	5.00E-02	2.98E+05	1.36E+09	No Toxicity Value	--	9.00E-02	5.36E+05
Mercury Compounds										
~Mercuric Chloride (and other Mercury salts)	1.36E+09	No Toxicity Value	--	3.00E-01	1.79E+06	1.36E+09	No Toxicity Value	--	3.00E-02	1.79E+05
~Mercury (elemental)	3.52E+04	No Toxicity Value	--	3.00E-01	4.62E+01	3.52E+04	No Toxicity Value	--	3.00E-02	4.62E+00
Methyl Acetate	8.23E+03	No Toxicity Value	--	No Toxicity Value	--	8.23E+03	No Toxicity Value	--	4.00E+03	1.44E+05
Methylene Chloride	2.22E+03	1.00E-08	2.72E+03	6.00E+02	5.84E+03	2.22E+03	1.00E-06	2.72E+01	4.00E+02	3.89E+03
Methylene-bis(2-chloroaniline), 4,4'-	1.36E+09	4.30E-04	3.88E+04	No Toxicity Value	--	1.36E+09	4.30E-04	3.88E+04	No Toxicity Value	--
Methylstyrene, Alpha-	1.30E+04	No Toxicity Value	--	No Toxicity Value	--	1.30E+04	No Toxicity Value	--	2.80E+02	1.59E+04
Mineral oils	1.39E+03	No Toxicity Value	--	No Toxicity Value	--	1.39E+03	No Toxicity Value	--	1.20E+04	7.32E+04
Nickel Hydroxide	1.36E+09	2.60E-04	6.41E+04	1.40E-02	8.34E+04	1.36E+09	2.60E-04	6.42E+04	1.40E-02	8.34E+04
Nickel Oxide	1.36E+09	2.60E-04	6.41E+04	2.00E-02	1.19E+05	1.36E+09	2.60E-04	6.42E+04	2.00E-02	1.19E+05
Nickel Refinery Dust	1.36E+09	2.40E-04	6.95E+04	1.40E-02	8.34E+04	1.36E+09	2.60E-04	6.42E+04	1.40E-02	8.34E+04
Nickel Soluble Salts	1.36E+09	2.60E-04	6.41E+04	9.00E-02	5.36E+05	1.36E+09	2.60E-04	6.42E+04	1.40E-02	8.34E+04
Nickel Subsulfide	1.36E+09	4.80E-04	3.47E+04	1.40E-02	8.34E+04	1.36E+09	4.90E-04	3.40E+04	1.40E-02	8.34E+04
Pentachloroethane	9.78E+03	No Toxicity Value	--	No Toxicity Value	--	9.78E+03	2.25E-05	5.33E+00	No Toxicity Value	--
Phosphorus, White	7.00E+03	No Toxicity Value	--	No Toxicity Value	--	7.00E+03	No Toxicity Value	--	8.00E-02	2.45E+00

Table A-6b. USEPA RSLs and DTSC-SLs for a Commercial Industrial Receptor Exposed to Compounds from Soil via Inhalation

Description	Variable	USEPA Value	DTSC Value	Units
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, worker	$AT_{nc,w}$	25	25	yrs
COPC Concentration in air	C_{air}	chemical-specific		µg/m^3
COPC Concentration in soil	C_{soil}	chemical-specific		mg/kg
Conversion Factor	CF_i	1.0E+03	1.0E+03	µg/mg
Exposure Duration, worker	ED_w	25	25	yrs
Exposure Frequency, worker	EF_w	250	250	days/yr
Exposure Time, worker	ET_w	8	8	hours/day
Inhalation Unit-Risk Factor	IUR	chemical-specific		(µg/m^3)$^{-1}$
Particulate emission factor (non-VOCs)	PEF	1.359E+09	1.360E+09	m^3/kg
Inhalation Reference Concentration	RfC	chemical-specific		µg/m^3
Regional screening level, inhalation	RSL_{inh}	chemical-specific		µg/m^3
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless
Volatilization Factor for VOCs (Table A-4)	VF_{worker}	chemical-specific		m^3/kg

Equations

Carcinogen:

$$RSL_{inh} = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_w \times ED_w \times ET_w \times IUR \times CF_I \times \left(\frac{1}{VF_{worker} \text{ or } PEF}\right)}$$

Noncarcinogen:

$$RSL_{inh} = \frac{THQ \times AT_w \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_w \times ED_w \times ET_w \times \frac{1}{RfC} \times CF_I \times \left(\frac{1}{VF_{worker} \text{ or } PEF}\right)}$$

	USEPA Commercial RSL_{inh}					DTSC-Modified Residential RSLinh				
Analyte	**VF_{worker} or PEF** m^3/kg	**IUR** (µg/m^3)$^{-1}$	**Cancer** (mg/kg)	**RfC** (µg/m^3)	**Noncancer** (mg/kg)	**VF_{worker} or PEF** m^3/kg	**IUR** (µg/m^3)$^{-1}$	**Cancer** (mg/kg)	**RfC** (µg/m^3)	**Noncancer** (mg/kg)
Phthalates										
~Dimethylterephthalate	2.16E+04	No Toxicity Value	--	No Toxicity Value	--	2.16E+04	No Toxicity Value	--	4.00E+02	3.79E+04
Silver	1.36E+09	No Toxicity Value	--	No Toxicity Value	--	1.36E+09	No Toxicity Value	--	No Toxicity Value	--
Tetrachloroethane, 1,1,1,2-	5.75E+03	7.40E-06	9.54E+00	No Toxicity Value	--	5.75E+03	7.40E-06	9.54E+00	1.20E+02	3.02E+03
Tetrachloroethane, 1,1,2,2-	1.53E+04	5.80E-05	3.24E+00	No Toxicity Value	--	1.53E+04	5.80E-05	3.24E+00	8.00E+01	5.37E+03
Tetrachloroethylene	2.38E+03	2.60E-07	1.12E+02	4.00E+01	4.17E+02	2.38E+03	5.90E-06	4.94E+00	3.50E+01	3.65E+02
Toluene	4.35E+03	No Toxicity Value	--	5.00E+03	9.52E+04	4.35E+03	No Toxicity Value	--	3.00E+02	5.71E+03
Tri-n-butyltin	3.40E+03	No Toxicity Value	--	No Toxicity Value	--	3.40E+03	No Toxicity Value	--	1.20E+00	1.79E+01
Trichlorobenzene, 1,2,3-	3.27E+04	No Toxicity Value	--	No Toxicity Value	--	3.27E+04	No Toxicity Value	--	3.20E+00	4.58E+02
Trichloroethane, 1,1,1-	1.67E+03	No Toxicity Value	--	5.00E+03	3.66E+04	1.67E+03	No Toxicity Value	--	1.00E+03	7.31E+03
Trichlorofluoromethane	1.05E+03	No Toxicity Value	--	No Toxicity Value	--	1.05E+03	No Toxicity Value	--	1.20E+03	5.50E+03
Trichlorophenol, 2,4,6-	1.36E+09	3.10E-06	5.38E+06	No Toxicity Value	--	1.36E+09	2.00E-05	8.34E+05	No Toxicity Value	--
Trichloropropane, 1,1,2-	1.53E+04	No Toxicity Value	--	No Toxicity Value	--	1.53E+04	No Toxicity Value	--	2.00E+01	1.34E+03
Trichloropropane, 1,2,3-	1.59E+04	No Toxicity Value	--	3.00E-01	2.09E+01	1.59E+04	7.50E-03	2.60E-02	3.00E-01	2.09E+01
Trimethylbenzene, 1,3,5-	6.70E+03	No Toxicity Value	--	No Toxicity Value	--	6.70E+03	No Toxicity Value	--	4.00E+01	1.17E+03
Trimethylpentene, 2,4,4-	1.01E+03	No Toxicity Value	--	No Toxicity Value	--	1.01E+03	No Toxicity Value	--	4.00E+01	1.77E+02
Vanadium and Compounds	1.36E+09	No Toxicity Value	--	1.00E-01	5.95E+05	1.36E+09	No Toxicity Value	--	1.00E-01	5.96E+05
Vinyl Chloride	9.66E+02	4.40E-06	2.69E+00	1.00E+02	4.23E+02	9.66E+02	7.80E-05	1.52E-01	1.00E+02	4.23E+02
Additional Analytes										
Beryllium Sulfate	1.36E+09	2.40E-03	6.95E+03	2.00E-02	1.19E+05	1.36E+09	8.60E-01	1.94E+01	7.00E-03	4.17E+04
Dichlorobenzene, 1,3-	2.18E+03	No Toxicity Value	--	No Toxicity Value	--	2.18E+03	No Toxicity Value	--	1.20E+02	1.14E+03
Methylcyclohexane	8.85E+02	No Toxicity Value	--	No Toxicity Value	--	8.85E+02	No Toxicity Value	--	6.00E+03	2.33E+04

"--" = no value

Table B-1. DTSC-Recommended Screening Levels for Tap Water

		Toxicity Factors for DTSC-SLs								Screening Levels for Tap Water (µg/L)							
		Oral Slope Factor		Inhalation Unit Risk		Reference Dose - Oral		Reference Concentration		Cancer Endpoint		Cancer Endpoint		Noncancer Endpoint		Noncancer Endpoint	
Analyte	CAS #	SFo (mg/kg-d)$^{-1}$	Source	IUR (µg/m^3)$^{-1}$	Source	RfDo (mg/kg-d)	Ref.	RfC or REL (µg/m^3)	Source	USEPA RSL$_{Combined}$	DTSC-SL$_{Combined}$	Final Value	Source	USEPA RSL$_{Combined}$	DTSC-SL$_{Combined}$	Final Value	Source
USEPA RSL Analytes																	
Acetophenone	98-86-2	--	--	--	--	1.0E-01	IRIS	4.0E+02	Route	--	--	--	--	1.9E+03	5.8E+02	5.8E+02	DTSC
Acrylamide	79-06-1	4.5E+00	OEHHA	1.3E-03	OEHHA	2.0E-03	IRIS	6.0E+00	IRIS	5.0E-02	5.6E-03	5.6E-03	DTSC	4.0E+01	4.0E+01	4.0E+01	USEPA
Acrylonitrile	107-13-1	1.0E+00	OEHHA	2.9E-04	OEHHA	4.0E-02	ATSDR	2.0E+00	IRIS	5.2E-02	1.5E-02	1.5E-02	DTSC	4.1E+00	1.0E+01	4.1E+00	USEPA
Aldrin	309-00-2	1.7E+01	IRIS	4.9E-03	IRIS	3.0E-05	IRIS	1.2E-01	Route	9.2E-04	9.2E-04	9.2E-04	USEPA	6.0E-01	1.8E-01	1.8E-01	DTSC
Arsenic, Inorganic	7440-38-2	9.5E+00	OEHHA PHG	3.3E-03	OEHHA	3.5E-06	OEHHA	1.5E-02	OEHHA	5.2E-02	8.2E-03	8.2E-03	DTSC	6.0E+00	7.0E-02	7.0E-02	DTSC
Benzaldehyde	100-52-7	--	--	--	--	1.0E-01	IRIS	4.0E+02	Route	--	--	--	--	1.9E+03	5.8E+02	5.8E+02	DTSC
Benzene	71-43-2	1.0E-01	OEHHA	2.9E-05	OEHHA	4.0E-03	IRIS	3.0E+00	OEHHA	4.5E-01	1.5E-01	1.5E-01	DTSC	3.3E+01	5.7E+00	5.7E+00	DTSC
Benzenethiol	108-98-5	--	--	--	--	1.0E-03	PPRTV	4.0E+00	Route	--	--	--	--	1.7E+01	5.6E+00	5.6E+00	DTSC
Beryllium and compounds	7440-41-7	--	--	--	--	2.0E-04	OEHHA PHG	7.0E-03	OEHHA	--	--	--	--	2.5E+01	2.5E+00	2.5E+00	DTSC
Bis(2-chloro-1-methylethyl) ether	108-60-1	--	--	--	--	4.0E-02	IRIS	1.6E+02	Route	--	--	--	--	7.1E+02	2.3E+02	2.3E+02	DTSC
Bromodichloromethane	75-27-4	1.3E-01	OEHHA	3.7E-05	OEHHA	2.0E-02	IRIS	8.0E+01	Route	1.3E-01	1.2E-01	1.2E-01	DTSC	3.8E+02	1.2E+02	1.2E+02	DTSC
Bromoform	75-25-2	1.1E-02	OEHHA	1.1E-06	IRIS	2.0E-02	IRIS	8.0E+01	Route	3.3E+00	2.9E+00	2.9E+00	DTSC	3.8E+02	1.2E+02	1.2E+02	DTSC
Butanol, N-	71-36-3	--	--	--	--	1.0E-01	IRIS	4.0E+02	Route	--	--	--	--	2.0E+03	5.9E+02	5.9E+02	DTSC
Butylbenzene, n-	104-51-8	--	--	--	--	5.0E-02	PPRTV	2.0E+02	Route	--	--	--	--	1.0E+03	2.9E+02	2.9E+02	DTSC
Butylbenzene, sec-	135-98-8	--	--	--	--	1.0E-01	Screening PPRTV	4.0E+02	Route	--	--	--	--	2.0E+03	5.9E+02	5.9E+02	DTSC
Carbon Tetrachloride	56-23-5	1.5E-01	OEHHA	4.2E-05	OEHHA	4.0E-03	IRIS	4.0E+01	OEHHA	4.5E-01	1.0E-01	1.0E-01	DTSC	4.9E+01	3.6E+01	3.6E+01	DTSC
Chloral Hydrate	302-17-0	--	--	--	--	1.0E-01	IRIS	4.0E+02	Route	--	--	--	--	2.0E+03	5.9E+02	5.9E+02	DTSC
Chlordane	12789-03-6	1.3E+00	OEHHA	3.4E-04	OEHHA	5.0E-04	IRIS	7.0E-01	IRIS	4.5E-02	1.3E-02	1.3E-02	DTSC	1.3E+00	1.3E+00	1.3E+00	USEPA
Chloroacetaldehyde, 2-	107-20-0	2.7E-01	Screening PPRTV	6.8E-05	Route	--	--	--	--	2.9E-01	6.4E-02	6.4E-02	DTSC	--	--	--	--
Chloroethanol, 2-	107-07-3	--	--	--	--	2.0E-02	PPRTV	8.0E+01	Route	--	--	--	--	4.0E+02	1.2E+02	1.2E+02	DTSC
Chlorophenol, 2-	95-57-8	--	--	--	--	5.0E-03	IRIS	2.0E+01	Route	--	--	--	--	9.1E+01	2.9E+01	2.9E+01	DTSC
Crotonaldehyde, trans-	123-73-9	1.9E+00	HEAST	4.8E-04	Route	1.0E-03	PPRTV	4.0E+00	Route	4.0E-02	9.1E-03	9.1E-03	DTSC	2.0E+01	5.9E+00	5.9E+00	DTSC
Cyanides																	
~Cyanogen	460-19-5	--	--	--	--	1.0E-03	IRIS	4.0E+00	Route	--	--	--	--	2.0E+01	5.9E+00	5.9E+00	DTSC
~Cyanogen Bromide	506-68-3	--	--	--	--	9.0E-02	IRIS	3.6E+02	Route	--	--	--	--	1.8E+03	5.3E+02	5.3E+02	DTSC
~Cyanogen Chloride	506-77-4	--	--	--	--	5.0E-02	IRIS	2.0E+02	Route	--	--	--	--	1.0E+03	2.9E+02	2.9E+02	DTSC
~Thiocyanic Acid	463-56-9	--	--	--	--	2.0E-04	PPRTV	8.0E-01	Route	--	--	--	--	4.0E+00	1.2E+00	1.2E+00	DTSC
Cyclohexylamine	108-91-8	--	--	--	--	2.0E-01	IRIS	8.0E+02	Route	--	--	--	--	3.8E+03	1.2E+03	1.2E+03	DTSC
Dibromochloromethane	124-48-1	8.4E-02	IRIS	2.1E-05	Route	2.0E-02	IRIS	8.0E+01	Route	8.7E-01	2.0E-01	2.0E-01	DTSC	3.8E+02	1.2E+02	1.2E+02	DTSC
Dibromoethane, 1,2-	106-93-4	2.0E+00	IRIS	6.0E-04	IRIS	9.0E-03	IRIS	8.0E-01	OEHHA	7.5E-03	1.6E-02	7.5E-03	USEPA	1.7E+01	1.7E+00	1.7E+00	DTSC
Dichloroethane, 1,1-	75-34-3	5.7E-03	OEHHA	1.6E-06	OEHHA	2.0E-01	PPRTV	8.0E+02	Route	2.7E+00	2.7E+00	2.7E+00	USEPA	3.8E+03	1.2E+03	1.2E+03	DTSC
Dichloroethylene, 1,2-cis-	156-59-2	--	--	--	--	2.0E-03	IRIS	8.0E+00	Route	--	--	--	--	3.7E+01	1.2E+01	1.2E+01	DTSC
Dichloroethylene, 1,2-trans-	156-60-5	--	--	--	--	2.0E-02	IRIS	8.0E+01	Route	--	--	--	--	3.6E+02	1.1E+02	1.1E+02	DTSC
Dichloropropane, 1,3-	142-28-9	--	--	--	--	2.0E-02	PPRTV	8.0E+01	Route	--	--	--	--	3.7E+02	1.1E+02	1.1E+02	DTSC
Diethylformamide	617-84-5	--	--	--	--	1.0E-03	PPRTV	4.0E+00	Route	--	--	--	--	2.0E+01	5.9E+00	5.9E+00	DTSC
Diisopropyl Methylphosphonate	1445-75-6	--	--	--	--	8.0E-02	IRIS	3.2E+02	Route	--	--	--	--	1.6E+03	4.7E+02	4.7E+02	DTSC
Dimethylaniline, N,N-	121-69-7	--	--	--	--	2.0E-03	IRIS	8.0E+00	Route	--	--	--	--	3.5E+01	1.1E+01	1.1E+01	DTSC
Dithiane, 1,4-	505-29-3	--	--	--	--	1.0E-02	IRIS	4.0E+01	Route	--	--	--	--	2.0E+02	5.9E+01	5.9E+01	DTSC
Endosulfan	115-29-7	--	--	--	--	6.0E-03	IRIS	2.4E+01	Route	--	--	--	--	1.0E+02	3.3E+01	3.3E+01	DTSC
Epichlorohydrin	106-89-8	8.0E-02	OEHHA	2.3E-05	OEHHA	6.0E-03	PPRTV	1.0E+00	IRIS	2.9E+00	1.9E-01	1.9E-01	DTSC	2.0E+00	5.9E+00	2.0E+00	USEPA
Ethyl Ether	60-29-7	--	--	--	--	2.0E-01	IRIS	8.0E+02	Route	--	--	--	--	3.9E+03	1.2E+03	1.2E+03	DTSC
Ethylene Diamine	107-15-3	--	--	--	--	9.0E-02	PPRTV	3.6E+02	Route	--	--	--	--	1.8E+03	5.3E+02	5.3E+02	DTSC
Furans																	
~Furan	110-00-9	--	--	--	--	1.0E-03	IRIS	4.0E+00	Route	--	--	--	--	1.9E+01	5.8E+00	5.8E+00	DTSC
Guanidine	113-00-8	--	--	--	--	1.0E-02	Screening PPRTV	4.0E+01	Route	--	--	--	--	2.0E+02	5.9E+01	5.9E+01	DTSC
Hexabromobenzene	87-82-1	--	--	--	--	2.0E-03	IRIS	8.0E+00	Route	--	--	--	--	4.0E+01	1.2E+01	1.2E+01	DTSC
Hexachlorobenzene	118-74-1	1.8E+00	OEHHA	5.1E-04	OEHHA	8.0E-04	IRIS	3.2E+00	Route	9.8E-03	8.8E-03	8.8E-03	DTSC	1.6E+01	4.7E+00	4.7E+00	DTSC
Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	1.1E+00	OEHHA	3.1E-04	OEHHA	3.0E-04	IRIS	1.2E+00	Route	5.1E-02	1.3E-02	1.3E-02	DTSC	4.5E+00	1.6E+00	1.6E+00	DTSC
Isobutyl Alcohol	78-83-1	--	--	--	--	3.0E-01	IRIS	1.2E+03	Route	--	--	--	--	5.9E+03	1.8E+03	1.8E+03	DTSC
Lead Compounds																	
~Lead subacetate	1335-32-6	3.8E-02	OEHHA	1.1E-05	OEHHA	--	--	--	--	9.2E+00	2.1E+00	2.1E+00	DTSC	--	--	--	--
Lewisite	541-25-3	--	--	--	--	5.0E-06	PPRTV	2.0E-02	Route	--	--	--	--	9.0E-02	2.9E-02	2.9E-02	DTSC
Mercury Compounds																	
~Mercury (elemental)	7439-97-6	--	--	--	--	1.6E-04	OEHHA	3.0E-02	OEHHA	--	--	--	--	6.3E-01	6.1E-02	6.1E-02	DTSC
Merphos	150-50-5	--	--	--	--	3.0E-05	IRIS	1.2E-01	Route	--	--	--	--	6.0E-01	1.8E-01	1.8E-01	DTSC
Methyl Acetate	79-20-9	--	--	--	--	1.0E+00	Screening PPRTV	4.0E+03	Route	--	--	--	--	2.0E+04	5.9E+03	5.9E+03	DTSC
Methylene Chloride	75-09-2	1.4E-02	OEHHA	1.0E-06	OEHHA	6.0E-03	IRIS	4.0E+02	OEHHA	1.1E+01	9.3E-01	9.3E-01	DTSC	1.1E+02	1.0E+02	1.0E+02	DTSC
Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	1.5E+00	OEHHA	4.3E-04	OEHHA	2.0E-03	PPRTV	No Toxicity Value	--	1.6E-01	1.0E-02	1.0E-02	DTSC	2.6E+01	2.6E+01	2.6E+01	USEPA
Mineral oils	8012-95-1	--	--	--	--	3.0E+00	PPRTV	1.2E+04	Route	--	--	--	--	6.0E+04	1.8E+04	1.8E+04	DTSC
Mirex	2385-85-5	1.8E+01	OEHHA	5.1E-03	OEHHA	2.0E-04	IRIS	8.0E-01	Route	8.8E-04	8.8E-04	8.8E-04	USEPA	4.0E+00	1.2E+00	1.2E+00	DTSC
Naled	300-76-5	--	--	--	--	2.0E-03	IRIS	8.0E+00	Route	--	--	--	--	4.0E+01	1.2E+01	1.2E+01	DTSC
Nitrotoluene, o-	88-72-2	2.2E-01	PPRTV	5.5E-05	Route	9.0E-04	PPRTV	3.6E+00	Route	3.1E-01	7.7E-02	7.7E-02	DTSC	1.6E+01	5.1E+00	5.1E+00	DTSC
Pentabromodiphenyl Ether	32534-81-9	--	--	--	--	2.0E-03	IRIS	8.0E+00	Route	--	--	--	--	4.0E+01	1.2E+01	1.2E+01	DTSC
Pentachloroethane	76-01-7	9.0E-02	PPRTV	2.3E-05	Route	--	--	--	--	6.4E-01	1.8E-01	1.8E-01	DTSC	--	--	--	--
Perfluorobutane Sulfonate	375-73-5	--	--	--	--	2.0E-02	PPRTV	8.0E+01	Route	--	--	--	--	3.8E+02	1.2E+02	1.2E+02	DTSC
Phosphorus, White	7723-14-0	--	--	--	--	2.0E-05	IRIS	8.0E-02	Route	--	--	--	--	4.0E-01	1.2E-01	1.2E-01	DTSC
Phthalates																	
~Dimethylterephthalate	120-61-6	--	--	--	--	1.0E-01	IRIS	4.0E+02	Route	--	--	--	--	1.9E+03	5.8E+02	5.8E+02	DTSC
Polychlorinated Biphenyls (PCBs)																	
~Aroclor 1016	12674-11-2	7.0E-02	IRIS (lowest risk)	2.0E-05	IRIS (lowest risk)	7.0E-05	IRIS	2.8E-01	Route	2.2E-01	2.2E-01	2.2E-01	USEPA	1.4E+00	4.1E-01	4.1E-01	DTSC
~Aroclor 1254	11097-69-1	2.0E+00	IRIS (high risk)	5.7E-04	IRIS (high risk)	2.0E-05	IRIS	8.0E-02	Route	7.9E-03	7.9E-03	7.9E-03	USEPA	4.0E-01	1.2E-01	1.2E-01	DTSC
~Aroclor 5460	11126-42-4	--	--	--	--	6.0E-04	Screening PPRTV	2.4E+00	Route	--	--	--	--	1.2E+01	3.5E+00	3.5E+00	DTSC
Propargyl Alcohol	107-19-7	--	--	--	--	2.0E-03	IRIS	8.0E+00	Route	--	--	--	--	4.0E+01	1.2E+01	1.2E+01	DTSC

Table B-1. DTSC-Recommended Screening Levels for Tap Water

		Toxicity Factors for DTSC-SLs								Screening Levels for Tap Water (µg/L)							
		Oral Slope Factor		Inhalation Unit Risk		Reference Dose - Oral		Reference Concentration		Cancer Endpoint		Cancer Endpoint		Noncancer Endpoint		Noncancer Endpoint	
Analyte	**CAS #**	**SFo** (mg/kg-d)$^{-1}$	**Source**	**IUR** (µg/m^3)$^{-1}$	**Source**	**RfDo** (mg/kg-d)	**Ref.**	**RfC or REL** (µg/m^3)	**Source**	**USEPA RSL$_{Combined}$**	**DTSC-SL$_{Combined}$**	**Final Value**	**Source**	**USEPA RSL$_{Combined}$**	**DTSC-SL$_{Combined}$**	**Final Value**	**Source**
Pyridine	110-86-1	--	--	--	--	1.0E-03	IRIS	4.0E+00	Route	--	--	--	--	2.0E+01	5.9E+00	5.9E+00	DTSC
Tetrachloroethane, 1,1,2,2-	79-34-5	2.7E-01	OEHHA	5.8E-05	OEHHA	2.0E-02	IRIS	8.0E+01	Route	7.6E-02	7.0E-02	7.0E-02	DTSC	3.6E+02	1.1E+02	1.1E+02	DTSC
Tetrachloroethylene	127-18-4	5.4E-01	OEHHA PHG	5.9E-06	OEHHA	6.0E-03	IRIS	3.5E+01	OEHHA	1.1E+01	8.3E-02	8.3E-02	DTSC	4.1E+01	3.8E+01	3.8E+01	DTSC
Trichloroethane, 1,1,1-	71-55-6	--	--	--	--	2.0E+00	IRIS	1.0E+03	OEHHA	--	--	--	--	8.0E+03	2.0E+03	2.0E+03	DTSC
Trichlorofluoromethane	75-69-4	--	--	--	--	3.0E-01	IRIS	1.2E+03	Route	--	--	--	--	5.2E+03	1.7E+03	1.7E+03	DTSC
Trichlorophenol, 2,4,6-	88-06-2	7.0E-02	OEHHA	2.0E-05	OEHHA	1.0E-03	PPRTV	No Toxicity Value	--	4.0E+00	6.3E-01	6.3E-01	DTSC	1.2E+01	1.2E+01	1.2E+01	USEPA
Trichloropropane, 1,1,2-	598-77-6	--	--	--	--	5.0E-03	IRIS	2.0E+01	Route	--	--	--	--	8.8E+01	2.8E+01	2.8E+01	DTSC
Trichloropropane, 1,2,3-	96-18-4	3.0E+01	IRIS	7.5E-03	Route	4.0E-03	IRIS	3.0E-01	IRIS	7.5E-04	2.0E-04	2.0E-04	DTSC	6.2E-01	6.2E-01	6.2E-01	USEPA
Additional Analytes																	
Beryllium Sulfate	13510-49-1	--	--	--	--	2.0E-04	OEHHA PHG	7.0E-03	OEHHA	--	--	--	--	2.5E+01	2.5E+00	2.5E+00	DTSC
Dichlorobenzene, 1,3-	541-73-1	--	--	--	--	3.0E-02	DTSC J&E	1.2E+02	Route	--	--	--	--	--	1.5E+02	1.5E+02	DTSC
Methylcyclohexane	108-87-2	--	--	--	--	No Toxicity Value	--	6.0E+03	Cyclohexane	--	--	--	--	--	1.3E+04	1.3E+04	DTSC

"--" = no value

Table B-2. Screening Levels for Tap Water: Comparison of USEPA RSLs and DTSC-SLs

	USEPA RSL for Tap Water (µg/L)								DTSC-SL for Tapwater RSL (µg/L)							
	Cancer Endpoint				Noncancer Endpoint				Cancer Endpoint				Noncancer Endpoint			
Analyte	RSL_{Ing}	RSL_{D}	RSL_{Inh}	$RSL_{Combined}$	RSL_{Ing}	RSL_{D}	RSL_{Inh}	$RSL_{Combined}$	$DTSC\text{-}SL_{Ing}$	$DTSC\text{-}SL_{D}$	$DTSC\text{-}SL_{Inh}$	$DTSC\text{-}SL_{Combined}$	$DTSC\text{-}SL_{Ing}$	$DTSC\text{-}SL_{D}$	$DTSC\text{-}SL_{Inh}$	$DTSC\text{-}SL_{Combined}$
USEPA RSL Analytes																
Acetophenone	--	--	--	--	2.01E+03	4.61E+04	--	1.92E+03	--	--	--	--	2.01E+03	4.61E+04	8.34E+02	5.82E+02
Acrylamide	5.01E-02	2.26E+01	--	5.00E-02	4.01E+01	2.10E+04	--	4.00E+01	5.57E-03	2.51E+00	--	5.55E-03	4.01E+01	2.10E+04	--	4.00E+01
Acrylonitrile	1.44E-01	1.38E+01	8.26E-02	5.23E-02	8.02E+02	8.87E+04	4.17E+00	4.15E+00	7.79E-02	7.47E+00	1.94E-02	1.55E-02	8.02E+02	8.87E+04	1.04E+01	1.03E+01
Aldrin	4.58E-03	--	1.15E-03	9.17E-04	6.02E-01	--	--	6.02E-01	4.58E-03	--	1.15E-03	9.17E-04	6.02E-01	--	2.50E-01	1.77E-01
Arsenic, Inorganic	5.19E-02	9.33E+00	--	5.17E-02	6.02E+00	1.36E+03	--	5.99E+00	8.20E-03	1.47E+00	--	8.16E-03	7.02E-02	1.59E+01	--	6.99E-02
Benzaldehyde	--	--	--	--	2.01E+03	4.91E+04	--	1.93E+03	--	--	--	--	2.01E+03	4.91E+04	8.34E+02	5.82E+02
Benzene	1.42E+00	9.45E+00	7.20E-01	4.54E-01	8.02E+01	6.06E+02	6.26E+01	3.32E+01	7.79E-01	5.20E+00	1.94E-01	1.51E-01	8.02E+01	6.06E+02	6.26E+00	5.75E+00
Benzenethiol	--	--	--	--	2.01E+01	1.03E+02	--	1.68E+01	--	--	--	--	2.01E+01	1.03E+02	8.34E+00	5.57E+00
Beryllium and compounds	--	--	--	--	4.01E+01	6.36E+01	--	2.46E+01	--	--	--	--	4.01E+00	6.36E+00	--	2.46E+00
Bis(2-chloro-1-methylethyl) ether	--	--	--	--	8.02E+02	6.47E+03	--	7.14E+02	--	--	--	--	8.02E+02	6.47E+03	3.34E+02	2.27E+02
Bromodichloromethane	1.26E+00	1.78E+01	1.52E-01	1.34E-01	4.01E+02	6.44E+03	--	3.78E+02	5.99E-01	8.50E+00	1.52E-01	1.19E-01	4.01E+02	6.44E+03	1.67E+02	1.16E+02
Bromoform	9.86E+00	1.35E+02	5.10E+00	3.28E+00	4.01E+02	6.20E+03	--	3.77E+02	7.08E+00	9.69E+01	5.10E+00	2.88E+00	4.01E+02	6.20E+03	1.67E+02	1.16E+02
Butanol, N-	--	--	--	--	2.01E+03	9.99E+04	--	1.97E+03	--	--	--	--	2.01E+03	9.99E+04	8.34E+02	5.86E+02
Butylbenzene, n-	--	--	--	--	1.00E+03	--	--	1.00E+03	--	--	--	--	1.00E+03	--	4.17E+02	2.95E+02
Butylbenzene, sec-	--	--	--	--	2.01E+03	--	--	2.01E+03	--	--	--	--	2.01E+03	--	8.34E+02	5.89E+02
Carbon Tetrachloride	1.11E+00	4.15E+00	9.36E-01	4.53E-01	8.02E+01	3.39E+02	2.09E+02	4.95E+01	5.19E-01	1.94E+00	1.34E-01	1.01E-01	8.02E+01	3.39E+02	8.34E+01	3.65E+01
Chloral Hydrate	--	--	--	--	2.01E+03	1.52E+05	--	1.98E+03	--	--	--	--	2.01E+03	1.52E+05	8.34E+02	5.87E+02
Chlordane	2.23E-01	--	5.62E-02	4.48E-02	1.00E+01	--	1.46E+00	1.27E+00	5.99E-02	--	1.65E-02	1.29E-02	1.00E+01	--	1.46E+00	1.27E+00
Chloroacetaldehyde, 2-	2.89E-01	4.38E+01	--	2.87E-01	--	--	--	--	2.89E-01	4.38E+01	8.32E-02	6.45E-02	--	--	--	--
Chloroethanol, 2-	--	--	--	--	4.01E+02	7.65E+04	--	3.99E+02	--	--	--	--	4.01E+02	7.65E+04	1.67E+02	1.18E+02
Chlorophenol, 2-	--	--	--	--	1.00E+02	1.02E+03	--	9.13E+01	--	--	--	--	1.00E+02	1.02E+03	4.17E+01	2.86E+01
Crotonaldehyde, trans-	4.10E-02	2.62E+00	--	4.04E-02	2.01E+01	1.49E+03	--	1.98E+01	4.10E-02	2.62E+00	1.18E-02	9.14E-03	2.01E+01	1.49E+03	8.34E+00	5.87E+00
Cyanides																
~Cyanogen	--	--	--	--	2.01E+01	5.10E+03	--	2.00E+01	--	--	--	--	2.01E+01	5.10E+03	8.34E+00	5.89E+00
~Cyanogen Bromide	--	--	--	--	1.80E+03	1.60E+06	--	1.80E+03	--	--	--	--	1.80E+03	1.60E+06	7.51E+02	5.30E+02
~Cyanogen Chloride	--	--	--	--	1.00E+03	5.76E+05	--	1.00E+03	--	--	--	--	1.00E+03	5.76E+05	4.17E+02	2.94E+02
~Thiocyanic Acid	--	--	--	--	4.01E+00	9.08E+02	--	3.99E+00	--	--	--	--	4.01E+00	9.08E+02	1.67E+00	1.18E+00
Cyclohexylamine	--	--	--	--	4.01E+03	9.24E+04	--	3.84E+03	--	--	--	--	4.01E+03	9.24E+04	1.67E+03	1.16E+03
Dibromochloromethane	9.27E-01	1.37E+01	--	8.69E-01	4.01E+02	6.72E+03	--	3.78E+02	9.27E-01	1.37E+01	2.67E-01	2.04E-01	4.01E+02	6.72E+03	1.67E+02	1.16E+02
Dibromoethane, 1,2-	3.90E-02	6.86E-01	9.36E-03	7.46E-03	1.80E+02	3.60E+03	1.88E+01	1.69E+01	2.16E-02	3.81E-01	7.91E-02	1.63E-02	1.80E+02	3.60E+03	1.67E+00	1.65E+00
Dichloroethane, 1,1-	1.37E+01	1.76E+02	3.51E+00	2.75E+00	4.01E+03	5.83E+04	--	3.75E+03	1.37E+01	1.76E+02	3.51E+00	2.75E+00	4.01E+03	5.83E+04	1.67E+03	1.16E+03
Dichloroethylene, 1,2-cis-	--	--	--	--	4.01E+01	5.17E+02	--	3.72E+01	--	--	--	--	4.01E+01	5.17E+02	1.67E+01	1.15E+01
Dichloroethylene, 1,2-trans-	--	--	--	--	4.01E+02	3.64E+03	--	3.61E+02	--	--	--	--	4.01E+02	3.64E+03	1.67E+02	1.14E+02
Dichloropropane, 1,3-	--	--	--	--	4.01E+02	4.63E+03	--	3.69E+02	--	--	--	--	4.01E+02	4.63E+03	1.67E+02	1.15E+02
Diethylformamide	--	--	--	--	2.01E+01	4.24E+03	--	2.00E+01	--	--	--	--	2.01E+01	4.24E+03	8.34E+00	5.88E+00
Diisopropyl Methylphosphonate	--	--	--	--	1.60E+03	1.26E+05	--	1.58E+03	--	--	--	--	1.60E+03	1.26E+05	6.67E+02	4.70E+02
Dimethylaniline, N,N-	--	--	--	--	4.01E+01	3.04E+02	--	3.54E+01	--	--	--	--	4.01E+01	3.04E+02	1.67E+01	1.13E+01
Dithiane, 1,4-	--	--	--	--	2.01E+02	1.59E+04	--	1.98E+02	--	--	--	--	2.01E+02	1.59E+04	8.34E+01	5.87E+01
Endosulfan	--	--	--	--	1.20E+02	6.29E+02	--	1.01E+02	--	--	--	--	1.20E+02	6.29E+02	5.01E+01	3.35E+01
Epichlorohydrin	7.87E+00	7.54E+02	4.68E+00	2.92E+00	1.20E+02	1.30E+04	2.09E+00	2.05E+00	9.74E-01	9.33E+01	2.44E-01	1.95E-01	1.20E+02	1.30E+04	6.26E+00	5.95E+00
Ethyl Ether	--	--	--	--	4.01E+03	1.97E+05	--	3.93E+03	--	--	--	--	4.01E+03	1.97E+05	1.67E+03	1.17E+03
Ethylene Diamine	--	--	--	--	1.80E+03	--	--	1.80E+03	--	--	--	--	1.80E+03	--	7.51E+02	5.30E+02
Furans																
~Furan	--	--	--	--	2.01E+01	4.75E+02	--	1.92E+01	--	--	--	--	2.01E+01	4.75E+02	8.34E+00	5.82E+00
Guanidine	--	--	--	--	2.01E+02	4.22E+05	--	2.00E+02	--	--	--	--	2.01E+02	4.22E+05	8.34E+01	5.89E+01
Hexabromobenzene	--	--	--	--	4.01E+01	--	--	4.01E+01	--	--	--	--	4.01E+01	--	1.67E+01	1.18E+01
Hexachlorobenzene	4.87E-02	--	1.22E-02	9.76E-03	1.60E+01	--	--	1.60E+01	4.33E-02	--	1.10E-02	8.78E-03	1.60E+01	--	6.67E+00	4.71E+00
Hexachlorocyclohexane, Gamma- (Lindane)	7.08E-02	1.83E-01	not as a volatile	5.10E-02	6.02E+00	1.76E+01	--	4.48E+00	7.08E-02	1.83E-01	1.81E-02	1.34E-02	6.02E+00	1.76E+01	2.50E+00	1.61E+00
Isobutyl Alcohol	--	--	--	--	6.02E+03	3.60E+05	--	5.92E+03	--	--	--	--	6.02E+03	3.60E+05	2.50E+03	1.76E+03
Lead Compounds																
~Lead subacetate	9.17E+00	--	--	9.17E+00	--	--	--	--	2.05E+00	--	--	2.05E+00	--	--	--	--
Lewisite	--	--	--	--	1.00E-01	9.05E-01	--	9.03E-02	--	--	--	--	1.00E-01	9.05E-01	4.17E-02	2.85E-02
Mercury Compounds																
~Mercury (elemental)	--	--	--	--	--	--	6.26E-01	6.26E-01	--	--	--	--	3.21E+00	1.63E+02	6.26E-02	6.14E-02
Merphos	--	--	--	--	6.02E-01	--	--	6.02E-01	--	--	--	--	6.02E-01	--	2.50E-01	1.77E-01
Methyl Acetate	--	--	--	--	2.01E+04	2.92E+06	--	1.99E+04	--	--	--	--	2.01E+04	2.92E+06	8.34E+03	5.88E+03
Methylene Chloride	1.25E+01	3.38E+02	2.03E+02	1.14E+01	1.20E+02	3.65E+03	1.25E+03	1.07E+02	1.79E+00	4.82E+01	2.03E+00	9.32E-01	1.20E+02	3.65E+03	8.34E+02	1.02E+02
Methylene-bis(2-chloroaniline), 4,4'-	2.51E-01	4.17E-01	--	1.56E-01	4.01E+01	7.51E+01	--	2.61E+01	1.67E-02	2.78E-02	--	1.04E-02	4.01E+01	7.51E+01	--	2.61E+01
Mineral oils	--	--	--	--	6.02E+04	--	--	6.02E+04	--	--	--	--	6.02E+04	--	2.50E+04	1.77E+04
Mirex	4.33E-03	--	1.10E-03	8.78E-04	4.01E+00	--	--	4.01E+00	4.33E-03	--	1.10E-03	8.78E-04	4.01E+00	--	1.67E+00	1.18E+00
Naled	--	--	--	--	4.01E+01	6.77E+03	--	3.99E+01	--	--	--	--	4.01E+01	6.77E+03	1.67E+01	1.18E+01
Nitrotoluene, o-	3.54E-01	2.67E+00	--	3.13E-01	1.80E+01	1.54E+02	--	1.62E+01	3.54E-01	2.67E+00	1.02E-01	7.70E-02	1.80E+01	1.54E+02	7.51E+00	5.13E+00
Pentabromodiphenyl Ether	--	--	--	--	4.01E+01	--	--	4.01E+01	--	--	--	--	4.01E+01	--	1.67E+01	1.18E+01
Pentachloroethane	8.66E-01	2.43E+00	--	6.39E-01	--	--	--	--	8.66E-01	2.43E+00	2.50E-01	1.79E-01	--	--	--	--
Perfluorobutane Sulfonate	--	--	--	--	4.01E+02	8.30E+03	--	3.83E+02	--	--	--	--	4.01E+02	8.30E+03	1.67E+02	1.16E+02
Phosphorus, White	--	--	--	--	4.01E-01	9.08E+01	--	3.99E-01	--	--	--	--	4.01E-01	9.08E+01	1.67E-01	1.18E-01

Table B-2. Screening Levels for Tap Water: Comparison of USEPA RSLs and DTSC-SLs

	USEPA RSL for Tap Water (µg/L)								DTSC-SL for Tapwater RSL (µg/L)							
	Cancer Endpoint				Noncancer Endpoint				Cancer Endpoint				Noncancer Endpoint			
Analyte	**RSL_{Ing}**	**RSL_{D}**	**RSL_{Inh}**	**$RSL_{Combined}$**	**RSL_{Ing}**	**RSL_{D}**	**RSL_{Inh}**	**$RSL_{Combined}$**	**$DTSC\text{-}SL_{Ing}$**	**$DTSC\text{-}SL_{D}$**	**$DTSC\text{-}SL_{Inh}$**	**$DTSC\text{-}SL_{Combined}$**	**$DTSC\text{-}SL_{Ing}$**	**$DTSC\text{-}SL_{D}$**	**$DTSC\text{-}SL_{Inh}$**	**$DTSC\text{-}SL_{Combined}$**
Phthalates																
~Dimethylterephthalate	--	--	--	--	2.01E+03	2.67E+04	--	1.87E+03	--	--	--	--	2.01E+03	2.67E+04	8.34E+02	5.76E+02
Polychlorinated Biphenyls (PCBs)																
~Aroclor 1016	1.11E+00	--	2.81E-01	2.24E-01	1.40E+00	--	--	1.40E+00	1.11E+00	--	2.81E-01	2.24E-01	1.40E+00	--	5.84E-01	4.12E-01
~Aroclor 1254	3.90E-02	--	9.83E-03	7.85E-03	4.01E-01	--	--	4.01E-01	3.90E-02	--	9.85E-03	7.86E-03	4.01E-01	--	1.67E-01	1.18E-01
~Aroclor 5460	--	--	--	--	1.20E+01	--	--	1.20E+01	--	--	--	--	1.20E+01	--	5.01E+00	3.54E+00
Propargyl Alcohol	--	--	--	--	4.01E+01	1.19E+04	--	4.00E+01	--	--	--	--	4.01E+01	1.19E+04	1.67E+01	1.18E+01
Pyridine	--	--	--	--	2.01E+01	1.47E+03	--	1.98E+01	--	--	--	--	2.01E+01	1.47E+03	8.34E+00	5.87E+00
Tetrachloroethane, 1,1,2,2-	3.90E-01	3.12E+00	9.68E-02	7.57E-02	4.01E+02	3.64E+03	--	3.61E+02	2.89E-01	2.31E+00	9.68E-02	7.03E-02	4.01E+02	3.64E+03	1.67E+02	1.14E+02
Tetrachloroethylene	3.71E+01	6.26E+01	2.16E+01	1.12E+01	1.20E+02	2.30E+02	8.34E+01	4.06E+01	1.44E-01	2.43E-01	9.52E-01	8.27E-02	1.20E+02	2.30E+02	7.30E+01	3.79E+01
Trichloroethane, 1,1,1-	--	--	--	--	4.01E+04	2.50E+05	1.04E+04	8.01E+03	--	--	--	--	4.01E+04	2.50E+05	2.09E+03	1.97E+03
Trichlorofluoromethane	--	--	--	--	6.02E+03	3.61E+04	--	5.16E+03	--	--	--	--	6.02E+03	3.61E+04	2.50E+03	1.69E+03
Trichlorophenol, 2,4,6-	7.08E+00	9.40E+00	--	4.04E+00	2.01E+01	3.01E+01	--	1.20E+01	1.11E+00	1.48E+00	--	6.35E-01	2.01E+01	3.01E+01	--	1.20E+01
Trichloropropane, 1,1,2-	--	--	--	--	1.00E+02	7.49E+02	--	8.84E+01	--	--	--	--	1.00E+02	7.49E+02	4.17E+01	2.83E+01
Trichloropropane, 1,2,3-	8.35E-04	7.08E-03	--	7.47E-04	8.02E+01	7.66E+02	6.26E-01	6.20E-01	8.35E-04	7.08E-03	2.70E-04	1.99E-04	8.02E+01	7.66E+02	6.26E-01	6.20E-01
Additional Analytes																
Beryllium Sulfate	--	--	--	--	4.01E+01	6.36E+01	--	2.46E+01	--	--	--	--	4.01E+00	6.36E+00	--	2.46E+00
Dichlorobenzene, 1,3-	--	--	--	--	--	--	--	--	--	--	--	--	6.02E+02	8.33E+02	2.50E+02	1.46E+02
Methylcyclohexane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.25E+04	1.25E+04

"--" = no value

Table B-3. USEPA RSLs and DTSC-SLs for a Residential Receptor Exposed to Tap Water via Ingestion

Definitions	Variable	USEPA Value	DTSC Value	
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	dimensionless
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	dimensionless
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	dimensionless
Age-dependent Adjustment Factor, 16-30	$ADAF_{16-30}$	1	1	dimensionless
Averaging Time, Carcinogens	AT_c	70	70	yrs
Averaging Time, Noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
Averaging Time, Noncarcinogens, adult	$AT_{nc,a}$	20	20	yrs
Body Weight, adult	BW_a	80	80	kg
Body Weight, child	BW_c	15	15	kg
Carcinogenic Adjustment Factor, oral exposure	CAF_O	0.804	0.804	dimensionless
Conversion Factor, ingestion exposure	CF_o	1.0E+03	1.0E+03	mg/µg
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-30	ED_{16-30}	10	10	yrs
Exposure Duration, adult	ED_a	20	20	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Fraction Contaminated Water Ingested, resident	FI_r	1.0	1.0	unitless
Water Ingestion Rate, adult	IRW_a	2.5	2.5	L/day
Water Ingestion Rate, child	IRW_c	0.78	0.78	L/day
Mutagenic Adjustment Factor, oral exposure	MAF_O	0.202	0.202	dimensionless
Oral Reference Dose	RfD_O	derived herein		mg/kg-day
(Regional) Screening Level, ingestion	$(R)SL_{ing}$	chemical-specific		µg/L
Oral Slope Factor	SF_O	chemical-specific		$(mg/kg\text{-}day)^{-1}$
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless

Equations

Cancer Risk:

Carcinogens:

$$(R)SL_{ing} = \frac{TR \times AT_{nc,c} \times 365\ day/year \times CF_O}{SF_o \times EF_r \times \left(\frac{ED_c \times IRW_c}{BW_c} + \frac{ED_a \times IRW_a}{BW_a}\right) \times FI_r}$$

Mutagens:

$$(R)SL_{ing} = \frac{TR \times AT_c \times 365\frac{day}{year} \times CF_o}{SF_o \times EF_r \times \left(\frac{ED_{0-2} \times IRW_c \times ADAF_{0-2}}{BW_c} + \frac{ED_{2-6} \times IR_c \times ADAF_{2-6}}{BW_c} + \frac{ED_{6-16} \times IRW_a \times ADAF_{6-16}}{BW_a} + \frac{ED_{16-26} \times IR_a \times ADAF_{16-26}}{BW_a}\right)}$$

Trichloroethene:

$$(R)SL_{ing} = \frac{TR \times AT_c \times 365\frac{day}{year} \times CF_o}{SF_o \times \left\{\left[CAF_O \times \left(\frac{ED_c \times EF_r \times IRW_c}{BW_c} + \frac{ED_a \times EF_r \times IRW_a}{BW_a}\right)\right] + \left[MAF_O \times \left(\frac{ED_{0-2} \times EF_r \times IRW_c \times ADAF_{0-2}}{BW_c} + \frac{ED_{2-6} \times EF_r \times IR_c \times ADAF_{2-6}}{BW_c} + \frac{ED_{6-16} \times EF_r \times IRW_a \times ADAF_{6-16}}{BW_a} + \frac{ED_{16-26} \times EF_r \times IR_a \times ADAF_{16-26}}{BW_a}\right)\right]\right\}}$$

Vinyl Chloride:

$$(R)SL_{ing} = \frac{TR}{\left(\frac{SF_o \times EF_r \times \left(\frac{ED_c \times IRW_c}{BW_c} + \frac{ED_a \times IRW_a}{BW_a}\right) \times \frac{1}{CF_o}}{AT_c \times 365\frac{day}{year}} + \frac{SF_o \times IRW_c \times \frac{1}{CF_o}}{BW_c}\right)}$$

Noncancer Hazard:

$$(R)SL_{ing} = \frac{THQ \times BW_c \times AT_{nc,c} \times 365\ day/year \times CF_O}{EF_r \times ED_c \times \frac{1}{RfD_o} \times IRW_c \times FI_r}$$

		USEPA Regional Screening Level for Ingestion Exposure to Residential Tap Water (USEPA RSL_{ing})				DTSC Screening Level for Ingestion Exposure to Residential Tap Water (DTSC-SL_{ing})			
Analyte	**Mutagen?**	**SF_O** $(mg/kg\text{-}day)^{-1}$	**USEPA RSL_{ing}: Cancer** (µg/L)	**RfD_O** (mg/kg-day)	**USEPA RSL_{ing}: Noncancer** (µg/L)	**SF_O** $(mg/kg\text{-}day)^{-1}$	**DTSC-SL_{ing}: Cancer** (µg/L)	**RfD_O** (mg/kg-day)	**DTSC-SL_{ing}: Noncancer** (µg/L)
USEPA RSL Analytes									
Acetophenone		--	--	1.00E-01	2.01E+03	--	--	1.00E-01	2.01E+03
Acrylamide	M	5.00E-01	5.01E-02	2.00E-03	4.01E+01	4.50E+00	5.57E-03	2.00E-03	4.01E+01
Acrylonitrile		5.40E-01	1.44E-01	4.00E-02	8.02E+02	1.00E+00	7.79E-02	4.00E-02	8.02E+02
Aldrin		1.70E+01	4.58E-03	3.00E-05	6.02E-01	1.70E+01	4.58E-03	3.00E-05	6.02E-01
Arsenic, Inorganic		1.50E+00	5.19E-02	3.00E-04	6.02E+00	9.50E+00	8.20E-03	3.50E-06	7.02E-02
Benzaldehyde		--	--	1.00E-01	2.01E+03	--	--	1.00E-01	2.01E+03
Benzene		5.50E-02	1.42E+00	4.00E-03	8.02E+01	1.00E-01	7.79E-01	4.00E-03	8.02E+01
Benzenethiol		--	--	1.00E-03	2.01E+01	--	--	1.00E-03	2.01E+01
Beryllium and compounds		--	--	2.00E-03	4.01E+01	--	--	2.00E-04	4.01E+00
Bis(2-chloro-1-methylethyl) ether		--	--	4.00E-02	8.02E+02	--	--	4.00E-02	8.02E+02
Bromodichloromethane		6.20E-02	1.26E+00	2.00E-02	4.01E+02	1.30E-01	5.99E-01	2.00E-02	4.01E+02
Bromoform		7.90E-03	9.86E+00	2.00E-02	4.01E+02	1.10E-02	7.08E+00	2.00E-02	4.01E+02
Butanol, N-		--	--	1.00E-01	2.01E+03	--	--	1.00E-01	2.01E+03
Butylbenzene, n-		--	--	5.00E-02	1.00E+03	--	--	5.00E-02	1.00E+03
Butylbenzene, sec-		--	--	1.00E-01	2.01E+03	--	--	1.00E-01	2.01E+03
Carbon Tetrachloride		7.00E-02	1.11E+00	4.00E-03	8.02E+01	1.50E-01	5.19E-01	4.00E-03	8.02E+01
Chloral Hydrate		--	--	1.00E-01	2.01E+03	--	--	1.00E-01	2.01E+03
Chlordane		3.50E-01	2.23E-01	5.00E-04	1.00E+01	1.30E+00	5.99E-02	5.00E-04	1.00E+01

Table B-3. USEPA RSLs and DTSC-SLs for a Residential Receptor Exposed to Tap Water via Ingestion

Definitions	Variable	USEPA Value	DTSC Value	
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	dimensionless
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	dimensionless
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	dimensionless
Age-dependent Adjustment Factor, 16-30	$ADAF_{16-30}$	1	1	dimensionless
Averaging Time, Carcinogens	AT_c	70	70	yrs
Averaging Time, Noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
Averaging Time, Noncarcinogens, adult	$AT_{nc,a}$	20	20	yrs
Body Weight, adult	BW_a	80	80	kg
Body Weight, child	BW_c	15	15	kg
Carcinogenic Adjustment Factor, oral exposure	CAF_O	0.804	0.804	dimensionless
Conversion Factor, ingestion exposure	CF_o	1.0E+03	1.0E+03	mg/µg
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-30	ED_{16-30}	10	10	yrs
Exposure Duration, adult	ED_a	20	20	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Fraction Contaminated Water Ingested, resident	FI_r	1.0	1.0	unitless
Water Ingestion Rate, adult	IRW_a	2.5	2.5	L/day
Water Ingestion Rate, child	IRW_c	0.78	0.78	L/day
Mutagenic Adjustment Factor, oral exposure	MAF_O	0.202	0.202	dimensionless
Oral Reference Dose	RfD_O	derived herein		mg/kg-day
(Regional) Screening Level, ingestion	$(R)SL_{ing}$	chemical-specific		µg/L
Oral Slope Factor	SF_O	chemical-specific		$(mg/kg\text{-}day)^{-1}$
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless

Equations

Cancer Risk:

Carcinogens:

$$(R)SL_{ing} = \frac{TR \times AT_{nc,c} \times 365\ day/year \times CF_O}{SF_o \times EF_r \times \left(\frac{ED_c \times IRW_c}{BW_c} + \frac{ED_a \times IRW_a}{BW_a}\right) \times FI_r}$$

Mutagens:

$$(R)SL_{ing} = \frac{TR \times AT_c \times 365\frac{day}{year} \times CF_o}{SF_o \times EF_r \times \left(\frac{ED_{0-2} \times IRW_c \times ADAF_{0-2}}{BW_c} + \frac{ED_{2-6} \times IR_c \times ADAF_{2-6}}{BW_c} + \frac{ED_{6-16} \times IRW_a \times ADAF_{6-16}}{BW_a} + \frac{ED_{16-26} \times IR_a \times ADAF_{16-26}}{BW_a}\right)}$$

Trichloroethene:

$$(R)SL_{ing} = \frac{TR \times AT_c \times 365\frac{day}{year} \times CF_o}{SF_o \times \left\{\left[CAF_O \times \left(\frac{ED_c \times EF_r \times IRW_c}{BW_c} + \frac{ED_a \times EF_r \times IRW_a}{BW_a}\right)\right] + \left[MAF_O \times \left(\frac{ED_{0-2} \times EF_r \times IRW_c \times ADAF_{0-2}}{BW_c} + \frac{ED_{2-6} \times EF_r \times IR_c \times ADAF_{2-6}}{BW_c} + \frac{ED_{6-16} \times EF_r \times IRW_a \times ADAF_{6-16}}{BW_a} + \frac{ED_{16-26} \times EF_r \times IR_a \times ADAF_{16-26}}{BW_a}\right)\right]\right\}}$$

Vinyl Chloride:

$$(R)SL_{ing} = \frac{TR}{\left(\frac{SF_o \times EF_r \times \left(\frac{ED_c \times IRW_c}{BW_c} + \frac{ED_a \times IRW_a}{BW_a}\right) \times \frac{1}{CF_o}}{AT_c \times 365\frac{day}{year}} + \frac{SF_o \times IRW_c \times \frac{1}{CF_o}}{BW_c}\right)}$$

Noncancer Hazard:

$$(R)SL_{ing} = \frac{THQ \times BW_c \times AT_{nc,c} \times 365\ day/year \times CF_O}{EF_r \times ED_c \times \frac{1}{RfD_o} \times IRW_c \times FI_r}$$

		USEPA Regional Screening Level for Ingestion Exposure to Residential Tap Water (USEPA RSL_{ing})				DTSC Screening Level for Ingestion Exposure to Residential Tap Water (DTSC-SL_{ing})			
Analyte	**Mutagen?**	**SF_O** $(mg/kg\text{-}day)^{-1}$	**USEPA RSL_{ing}: Cancer** (µg/L)	**RfD_O** (mg/kg-day)	**USEPA RSL_{ing}: Noncancer** (µg/L)	**SF_O** $(mg/kg\text{-}day)^{-1}$	**DTSC-SL_{ing}: Cancer** (µg/L)	**RfD_O** (mg/kg-day)	**DTSC-SL_{ing}: Noncancer** (µg/L)
Chloroacetaldehyde, 2-		2.70E-01	2.89E-01	--	--	2.70E-01	2.89E-01	--	--
Chloroethanol, 2-		--	--	2.00E-02	4.01E+02	--	--	2.00E-02	4.01E+02
Chlorophenol, 2-		--	--	5.00E-03	1.00E+02	--	--	5.00E-03	1.00E+02
Crotonaldehyde, trans-		1.90E+00	4.10E-02	1.00E-03	2.01E+01	1.90E+00	4.10E-02	1.00E-03	2.01E+01
Cyanides									
~Cyanogen		--	--	1.00E-03	2.01E+01	--	--	1.00E-03	2.01E+01
~Cyanogen Bromide		--	--	9.00E-02	1.80E+03	--	--	9.00E-02	1.80E+03
~Cyanogen Chloride		--	--	5.00E-02	1.00E+03	--	--	5.00E-02	1.00E+03
~Thiocyanic Acid		--	--	2.00E-04	4.01E+00	--	--	2.00E-04	4.01E+00
Cyclohexylamine		--	--	2.00E-01	4.01E+03	--	--	2.00E-01	4.01E+03
Dibromochloromethane		8.40E-02	9.27E-01	2.00E-02	4.01E+02	8.40E-02	9.27E-01	2.00E-02	4.01E+02
Dibromoethane, 1,2-		2.00E+00	3.90E-02	9.00E-03	1.80E+02	3.60E+00	2.16E-02	9.00E-03	1.80E+02
Dichloroethane, 1,1-		5.70E-03	1.37E+01	2.00E-01	4.01E+03	5.70E-03	1.37E+01	2.00E-01	4.01E+03
Dichloroethylene, 1,2-cis-		--	--	2.00E-03	4.01E+01	--	--	2.00E-03	4.01E+01
Dichloroethylene, 1,2-trans-		--	--	2.00E-02	4.01E+02	--	--	2.00E-02	4.01E+02
Dichloropropane, 1,3-		--	--	2.00E-02	4.01E+02	--	--	2.00E-02	4.01E+02
Diethylformamide		--	--	1.00E-03	2.01E+01	--	--	1.00E-03	2.01E+01
Diisopropyl Methylphosphonate		--	--	8.00E-02	1.60E+03	--	--	8.00E-02	1.60E+03
Dimethylaniline, N,N-		--	--	2.00E-03	4.01E+01	--	--	2.00E-03	4.01E+01

Table B-3. USEPA RSLs and DTSC-SLs for a Residential Receptor Exposed to Tap Water via Ingestion

Definitions	Variable	USEPA Value	DTSC Value	
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	dimensionless
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	dimensionless
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	dimensionless
Age-dependent Adjustment Factor, 16-30	$ADAF_{16-30}$	1	1	dimensionless
Averaging Time, Carcinogens	AT_c	70	70	yrs
Averaging Time, Noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
Averaging Time, Noncarcinogens, adult	$AT_{nc,a}$	20	20	yrs
Body Weight, adult	BW_a	80	80	kg
Body Weight, child	BW_c	15	15	kg
Carcinogenic Adjustment Factor, oral exposure	CAF_O	0.804	0.804	dimensionless
Conversion Factor, ingestion exposure	CF_o	1.0E+03	1.0E+03	mg/µg
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-30	ED_{16-30}	10	10	yrs
Exposure Duration, adult	ED_a	20	20	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Fraction Contaminated Water Ingested, resident	FI_r	1.0	1.0	unitless
Water Ingestion Rate, adult	IRW_a	2.5	2.5	L/day
Water Ingestion Rate, child	IRW_c	0.78	0.78	L/day
Mutagenic Adjustment Factor, oral exposure	MAF_O	0.202	0.202	dimensionless
Oral Reference Dose	RfD_O	derived herein		mg/kg-day
(Regional) Screening Level, ingestion	$(R)SL_{ing}$	chemical-specific		µg/L
Oral Slope Factor	SF_O	chemical-specific		$(mg/kg\text{-}day)^{-1}$
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless

Equations

Cancer Risk:

Carcinogens:

$$(R)SL_{ing} = \frac{TR \times AT_{nc,c} \times 365\ day/year \times CF_O}{SF_o \times EF_r \times \left(\frac{ED_c \times IRW_c}{BW_c} + \frac{ED_a \times IRW_a}{BW_a}\right) \times FI_r}$$

Mutagens:

$$(R)SL_{ing} = \frac{TR \times AT_c \times 365\frac{day}{year} \times CF_o}{SF_o \times EF_r \times \left(\frac{ED_{0-2} \times IRW_c \times ADAF_{0-2}}{BW_c} + \frac{ED_{2-6} \times IR_c \times ADAF_{2-6}}{BW_c} + \frac{ED_{6-16} \times IRW_a \times ADAF_{6-16}}{BW_a} + \frac{ED_{16-26} \times IR_a \times ADAF_{16-26}}{BW_a}\right)}$$

Trichloroethene:

$$(R)SL_{ing} = \frac{TR \times AT_c \times 365\frac{day}{year} \times CF_o}{SF_o \times \left\{\left[CAF_O \times \left(\frac{ED_c \times EF_r \times IRW_c}{BW_c} + \frac{ED_a \times EF_r \times IRW_a}{BW_a}\right)\right] + \left[MAF_O \times \left(\frac{ED_{0-2} \times EF_r \times IRW_c \times ADAF_{0-2}}{BW_c} + \frac{ED_{2-6} \times EF_r \times IR_c \times ADAF_{2-6}}{BW_c} + \frac{ED_{6-16} \times EF_r \times IRW_a \times ADAF_{6-16}}{BW_a} + \frac{ED_{16-26} \times EF_r \times IR_a \times ADAF_{16-26}}{BW_a}\right)\right]\right\}}$$

Vinyl Chloride:

$$(R)SL_{ing} = \frac{TR}{\left(\frac{SF_o \times EF_r \times \left(\frac{ED_c \times IRW_c}{BW_c} + \frac{ED_a \times IRW_a}{BW_a}\right) \times \frac{1}{CF_o}}{AT_c \times 365\frac{day}{year}} + \frac{SF_o \times IRW_c \times \frac{1}{CF_o}}{BW_c}\right)}$$

Noncancer Hazard:

$$(R)SL_{ing} = \frac{THQ \times BW_c \times AT_{nc,c} \times 365\ day/year \times CF_O}{EF_r \times ED_c \times \frac{1}{RfD_o} \times IRW_c \times FI_r}$$

		USEPA Regional Screening Level for Ingestion Exposure to Residential Tap Water (USEPA RSL_{ing})				DTSC Screening Level for Ingestion Exposure to Residential Tap Water (DTSC-SL_{ing})			
Analyte	**Mutagen?**	**SF_O** $(mg/kg\text{-}day)^{-1}$	**USEPA RSL_{ing}: Cancer** (µg/L)	**RfD_O** (mg/kg-day)	**USEPA RSL_{ing}: Noncancer** (µg/L)	**SF_O** $(mg/kg\text{-}day)^{-1}$	**DTSC-SL_{ing}: Cancer** (µg/L)	**RfD_O** (mg/kg-day)	**DTSC-SL_{ing}: Noncancer** (µg/L)
Dithiane, 1,4-		--	--	1.00E-02	2.01E+02	--	--	1.00E-02	2.01E+02
Endosulfan		--	--	6.00E-03	1.20E+02	--	--	6.00E-03	1.20E+02
Epichlorohydrin		9.90E-03	7.87E+00	6.00E-03	1.20E+02	8.00E-02	9.74E-01	6.00E-03	1.20E+02
Ethyl Ether		--	--	2.00E-01	4.01E+03	--	--	2.00E-01	4.01E+03
Ethylene Diamine		--	--	9.00E-02	1.80E+03	--	--	9.00E-02	1.80E+03
Furans									
~Furan		--	--	1.00E-03	2.01E+01	--	--	1.00E-03	2.01E+01
Guanidine		--	--	1.00E-02	2.01E+02	--	--	1.00E-02	2.01E+02
Hexabromobenzene		--	--	2.00E-03	4.01E+01	--	--	2.00E-03	4.01E+01
Hexachlorobenzene		1.60E+00	4.87E-02	8.00E-04	1.60E+01	1.80E+00	4.33E-02	8.00E-04	1.60E+01
Hexachlorocyclohexane, Gamma- (Lindane)		1.10E+00	7.08E-02	3.00E-04	6.02E+00	1.10E+00	7.08E-02	3.00E-04	6.02E+00
Isobutyl Alcohol		--	--	3.00E-01	6.02E+03	--	--	3.00E-01	6.02E+03
Lead Compounds									
~Lead subacetate		8.50E-03	9.17E+00	--	--	3.80E-02	2.05E+00	--	--
Lewisite		--	--	5.00E-06	1.00E-01	--	--	5.00E-06	1.00E-01
Mercury Compounds									
~Mercury (elemental)		--	--	--	--	--	--	1.60E-04	3.21E+00
Merphos		--	--	3.00E-05	6.02E-01	--	--	3.00E-05	6.02E-01
Methyl Acetate		--	--	1.00E+00	2.01E+04	--	--	1.00E+00	2.01E+04

Table B-3. USEPA RSLs and DTSC-SLs for a Residential Receptor Exposed to Tap Water via Ingestion

Definitions	Variable	USEPA Value	DTSC Value	
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	dimensionless
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	dimensionless
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	dimensionless
Age-dependent Adjustment Factor, 16-30	$ADAF_{16-30}$	1	1	dimensionless
Averaging Time, Carcinogens	AT_c	70	70	yrs
Averaging Time, Noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
Averaging Time, Noncarcinogens, adult	$AT_{nc,a}$	20	20	yrs
Body Weight, adult	BW_a	80	80	kg
Body Weight, child	BW_c	15	15	kg
Carcinogenic Adjustment Factor, oral exposure	CAF_O	0.804	0.804	dimensionless
Conversion Factor, ingestion exposure	CF_o	1.0E+03	1.0E+03	mg/µg
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-30	ED_{16-30}	10	10	yrs
Exposure Duration, adult	ED_a	20	20	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Fraction Contaminated Water Ingested, resident	FI_r	1.0	1.0	unitless
Water Ingestion Rate, adult	IRW_a	2.5	2.5	L/day
Water Ingestion Rate, child	IRW_c	0.78	0.78	L/day
Mutagenic Adjustment Factor, oral exposure	MAF_O	0.202	0.202	dimensionless
Oral Reference Dose	RfD_O	derived herein		mg/kg-day
(Regional) Screening Level, ingestion	$(R)SL_{ing}$	chemical-specific		µg/L
Oral Slope Factor	SF_O	chemical-specific		$(mg/kg\text{-}day)^{-1}$
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless

Equations

Cancer Risk:

Carcinogens:

$$(R)SL_{ing} = \frac{TR \times AT_{nc,c} \times 365\ day/year \times CF_O}{SF_o \times EF_r \times \left(\frac{ED_c \times IRW_c}{BW_c} + \frac{ED_a \times IRW_a}{BW_a}\right) \times FI_r}$$

Mutagens:

$$(R)SL_{ing} = \frac{TR \times AT_c \times 365\frac{day}{year} \times CF_o}{SF_o \times EF_r \times \left(\frac{ED_{0-2} \times IRW_c \times ADAF_{0-2}}{BW_c} + \frac{ED_{2-6} \times IR_c \times ADAF_{2-6}}{BW_c} + \frac{ED_{6-16} \times IRW_a \times ADAF_{6-16}}{BW_a} + \frac{ED_{16-26} \times IR_a \times ADAF_{16-26}}{BW_a}\right)}$$

Trichloroethene:

$$(R)SL_{ing} = \frac{TR \times AT_c \times 365\frac{day}{year} \times CF_o}{SF_o \times \left\{\left[CAF_O \times \left(\frac{ED_c \times EF_r \times IRW_c}{BW_c} + \frac{ED_a \times EF_r \times IRW_a}{BW_a}\right)\right] + \left[MAF_O \times \left(\frac{ED_{0-2} \times EF_r \times IRW_c \times ADAF_{0-2}}{BW_c} + \frac{ED_{2-6} \times EF_r \times IR_c \times ADAF_{2-6}}{BW_c} + \frac{ED_{6-16} \times EF_r \times IRW_a \times ADAF_{6-16}}{BW_a} + \frac{ED_{16-26} \times EF_r \times IR_a \times ADAF_{16-26}}{BW_a}\right)\right]\right\}}$$

Vinyl Chloride:

$$(R)SL_{ing} = \frac{TR}{\left(\frac{SF_o \times EF_r \times \left(\frac{ED_c \times IRW_c}{BW_c} + \frac{ED_a \times IRW_a}{BW_a}\right) \times \frac{1}{CF_o}}{AT_c \times 365\frac{day}{year}} + \frac{SF_o \times IRW_c \times \frac{1}{CF_o}}{BW_c}\right)}$$

Noncancer Hazard:

$$(R)SL_{ing} = \frac{THQ \times BW_c \times AT_{nc,c} \times 365\ day/year \times CF_O}{EF_r \times ED_c \times \frac{1}{RfD_o} \times IRW_c \times FI_r}$$

		USEPA Regional Screening Level for Ingestion Exposure to Residential Tap Water (USEPA RSL_{ing})				DTSC Screening Level for Ingestion Exposure to Residential Tap Water (DTSC-SL_{ing})			
Analyte	**Mutagen?**	**SF_O** $(mg/kg\text{-}day)^{-1}$	**USEPA RSL_{ing}: Cancer** (µg/L)	**RfD_O** (mg/kg-day)	**USEPA RSL_{ing}: Noncancer** (µg/L)	**SF_O** $(mg/kg\text{-}day)^{-1}$	**DTSC-SL_{ing}: Cancer** (µg/L)	**RfD_O** (mg/kg-day)	**DTSC-SL_{ing}: Noncancer** (µg/L)
Methylene Chloride	M	2.00E-03	1.25E+01	6.00E-03	1.20E+02	1.40E-02	1.79E+00	6.00E-03	1.20E+02
Methylene-bis(2-chloroaniline), 4,4'-	M	1.00E-01	2.51E-01	2.00E-03	4.01E+01	1.50E+00	1.67E-02	2.00E-03	4.01E+01
Mineral oils		--	--	3.00E+00	6.02E+04	--	--	3.00E+00	6.02E+04
Mirex		1.80E+01	4.33E-03	2.00E-04	4.01E+00	1.80E+01	4.33E-03	2.00E-04	4.01E+00
Naled		--	--	2.00E-03	4.01E+01	--	--	2.00E-03	4.01E+01
Nitrotoluene, o-		2.20E-01	3.54E-01	9.00E-04	1.80E+01	2.20E-01	3.54E-01	9.00E-04	1.80E+01
Pentabromodiphenyl Ether		--	--	2.00E-03	4.01E+01	--	--	2.00E-03	4.01E+01
Pentachloroethane		9.00E-02	8.66E-01	--	--	9.00E-02	8.66E-01	--	--
Perfluorobutane Sulfonate		--	--	2.00E-02	4.01E+02	--	--	2.00E-02	4.01E+02
Phosphorus, White		--	--	2.00E-05	4.01E-01	--	--	2.00E-05	4.01E-01
Phthalates									
~Dimethylterephthalate		--	--	1.00E-01	2.01E+03	--	--	1.00E-01	2.01E+03
Polychlorinated Biphenyls (PCBs)									
~Aroclor 1016		7.00E-02	1.11E+00	7.00E-05	1.40E+00	7.00E-02	1.11E+00	7.00E-05	1.40E+00
~Aroclor 1254		2.00E+00	3.90E-02	2.00E-05	4.01E-01	2.00E+00	3.90E-02	2.00E-05	4.01E-01
~Aroclor 5460		--	--	6.00E-04	1.20E+01	--	--	6.00E-04	1.20E+01
Propargyl Alcohol		--	--	2.00E-03	4.01E+01	--	--	2.00E-03	4.01E+01
Pyridine		--	--	1.00E-03	2.01E+01	--	--	1.00E-03	2.01E+01
Tetrachloroethane, 1,1,2,2-		2.00E-01	3.90E-01	2.00E-02	4.01E+02	2.70E-01	2.89E-01	2.00E-02	4.01E+02

Table B-3. USEPA RSLs and DTSC-SLs for a Residential Receptor Exposed to Tap Water via Ingestion

Definitions	Variable	USEPA Value	DTSC Value	
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	dimensionless
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	dimensionless
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	dimensionless
Age-dependent Adjustment Factor, 16-30	$ADAF_{16-30}$	1	1	dimensionless
Averaging Time, Carcinogens	AT_c	70	70	yrs
Averaging Time, Noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
Averaging Time, Noncarcinogens, adult	$AT_{nc,a}$	20	20	yrs
Body Weight, adult	BW_a	80	80	kg
Body Weight, child	BW_c	15	15	kg
Carcinogenic Adjustment Factor, oral exposure	CAF_O	0.804	0.804	dimensionless
Conversion Factor, ingestion exposure	CF_o	1.0E+03	1.0E+03	mg/µg
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-30	ED_{16-30}	10	10	yrs
Exposure Duration, adult	ED_a	20	20	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Fraction Contaminated Water Ingested, resident	FI_r	1.0	1.0	unitless
Water Ingestion Rate, adult	IRW_a	2.5	2.5	L/day
Water Ingestion Rate, child	IRW_c	0.78	0.78	L/day
Mutagenic Adjustment Factor, oral exposure	MAF_O	0.202	0.202	dimensionless
Oral Reference Dose	RfD_O	derived herein		mg/kg-day
(Regional) Screening Level, ingestion	$(R)SL_{ing}$	chemical-specific		µg/L
Oral Slope Factor	SF_O	chemical-specific		$(mg/kg\text{-}day)^{-1}$
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless

Equations

Cancer Risk:

Carcinogens:

$$(R)SL_{ing} = \frac{TR \times AT_{nc,c} \times 365\ day/year \times CF_O}{SF_o \times EF_r \times \left(\frac{ED_c \times IRW_c}{BW_c} + \frac{ED_a \times IRW_a}{BW_a}\right) \times FI_r}$$

Mutagens:

$$(R)SL_{ing} = \frac{TR \times AT_c \times 365\frac{day}{year} \times CF_o}{SF_o \times EF_r \times \left(\frac{ED_{0-2} \times IRW_c \times ADAF_{0-2}}{BW_c} + \frac{ED_{2-6} \times IR_c \times ADAF_{2-6}}{BW_c} + \frac{ED_{6-16} \times IRW_a \times ADAF_{6-16}}{BW_a} + \frac{ED_{16-26} \times IR_a \times ADAF_{16-26}}{BW_a}\right)}$$

Trichloroethene:

$$(R)SL_{ing} = \frac{TR \times AT_c \times 365\frac{day}{year} \times CF_o}{SF_o \times \left\{\left[CAF_O \times \left(\frac{ED_c \times EF_r \times IRW_c}{BW_c} + \frac{ED_a \times EF_r \times IRW_a}{BW_a}\right)\right] + \left[MAF_O \times \left(\frac{ED_{0-2} \times EF_r \times IRW_c \times ADAF_{0-2}}{BW_c} + \frac{ED_{2-6} \times EF_r \times IR_c \times ADAF_{2-6}}{BW_c} + \frac{ED_{6-16} \times EF_r \times IRW_a \times ADAF_{6-16}}{BW_a} + \frac{ED_{16-26} \times EF_r \times IR_a \times ADAF_{16-26}}{BW_a}\right)\right]\right\}}$$

Vinyl Chloride:

$$(R)SL_{ing} = \frac{TR}{\left(\frac{SF_o \times EF_r \times \left(\frac{ED_c \times IRW_c}{BW_c} + \frac{ED_a \times IRW_a}{BW_a}\right) \times \frac{1}{CF_o}}{AT_c \times 365\frac{day}{year}} + \frac{SF_o \times IRW_c \times \frac{1}{CF_o}}{BW_c}\right)}$$

Noncancer Hazard:

$$(R)SL_{ing} = \frac{THQ \times BW_c \times AT_{nc,c} \times 365\ day/year \times CF_O}{EF_r \times ED_c \times \frac{1}{RfD_o} \times IRW_c \times FI_r}$$

		USEPA Regional Screening Level for Ingestion Exposure to Residential Tap Water (USEPA RSL_{ing})				DTSC Screening Level for Ingestion Exposure to Residential Tap Water (DTSC-SL_{ing})			
Analyte	**Mutagen?**	**SF_O** $(mg/kg\text{-}day)^{-1}$	**USEPA RSL_{ing}: Cancer** (µg/L)	**RfD_O** (mg/kg-day)	**USEPA RSL_{ing}: Noncancer** (µg/L)	**SF_O** $(mg/kg\text{-}day)^{-1}$	**DTSC-SL_{ing}: Cancer** (µg/L)	**RfD_O** (mg/kg-day)	**DTSC-SL_{ing}: Noncancer** (µg/L)
Tetrachloroethylene		2.10E-03	3.71E+01	6.00E-03	1.20E+02	5.40E-01	1.44E-01	6.00E-03	1.20E+02
Trichloroethane, 1,1,1-		--	--	2.00E+00	4.01E+04	--	--	2.00E+00	4.01E+04
Trichlorofluoromethane		--	--	3.00E-01	6.02E+03	--	--	3.00E-01	6.02E+03
Trichlorophenol, 2,4,6-		1.10E-02	7.08E+00	1.00E-03	2.01E+01	7.00E-02	1.11E+00	1.00E-03	2.01E+01
Trichloropropane, 1,1,2-		--	--	5.00E-03	1.00E+02	--	--	5.00E-03	1.00E+02
Trichloropropane, 1,2,3-	M	3.00E+01	8.35E-04	4.00E-03	8.02E+01	3.00E+01	8.35E-04	4.00E-03	8.02E+01
Additional Analytes									
Beryllium Sulfate		--	--	2.00E-03	4.01E+01	--	--	2.00E-04	4.01E+00
Dichlorobenzene, 1,3-		--	--	--	--	--	--	3.00E-02	6.02E+02
Methylcyclohexane		--	--	--	--	--	--	--	--

"--" = no value

Table B-4. Derivation of Dermally-Absorbed Dose per Event: Domestic Use of Water -- Residential Scenario

Definition	Variable	USEPA Value	DTSC Value	
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	dimensionless
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	dimensionless
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	dimensionless
Age-dependent Adjustment Factor, 16-26	$ADAF_{16-26}$	1	1	dimensionless
Averaging Time, Carcinogens	AT_c	70	70	yrs
Averaging Time, Noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
Averaging Time, Noncarcinogens, adult	$AT_{nc,a}$	20	20	yrs
Body Weight, adult	BW_a	80	80	kg
Body Weight, child	BW_c	15	15	kg
Carcinogenic Adjustment Factor, oral exposure	CAF_O	0.804	0.804	dimensionless
Conversion factor, dermal	CF_{d1}	1000	1000	µg/mg
COPC Absorbed Dose per Event	DA_{event}	chemical and receptor-specific		µg/cm^2-event
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-26	ED_{16-26}	10	10	yrs
Exposure Duration, adult	ED_a	20	20	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Event Frequency, resident	EV_r	1	1	events/day
Mutagenic Adjustment Factor, oral exposure	MAF_O	0.202	0.202	dimensionless
Oral Reference Dose Adjusted for GI Absorption	RfD_d	chemical-specific		(mg/kg-day)
Exposed Body Surface Area, adult	SA_a	20900	20900	cm^2
Exposed Body Surface Area, child	SA_c	6378	6378	cm^2
Oral Slope Factor Adjusted for GI Absorption	SF_D	chemical-specific		(mg/kg-day)$^{-1}$
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless

Equations

Cancer Risk:

Carcinogens:

$$DA_{event,(carcinogen)} = \frac{TR \times AT_c \times 365\frac{day}{year} \times CF_{d1}}{SF_D \times EF_r \times \left(\frac{EV_r \times ED_c \times SA_c}{BW_c} + \frac{EV_r \times ED_a \times SA_a}{BW_a}\right)}$$

Mutagens:

$$DA_{event,(mutagen)} = \frac{TR \times AT_c \times 365\frac{day}{year} \times CF_{d1}}{SF_d \times EF_r \times \left(\begin{array}{l}\frac{EV_r \times ED_{0-2} \times SA_c \times ADAF_{0-2}}{BW_c} + \frac{EV_r \times ED_{2-6} \times SA_c \times ADAF_{2-6}}{BW_c} \\ + \frac{EV_r \times ED_{6-16} \times SA_a \times ADAF_{6-16}}{BW_a} + \frac{EV_r \times ED_{16-26} \times SA_a \times ADAF_{16-26}}{BW_a}\end{array}\right)}$$

Trichloroethene:

$$DA_{event,(trichloroethene)} = \frac{TR \times AT_c \times 365\frac{day}{year} \times CF_{d1}}{SF_d \times \left\{\left[CAF_O \times \left(\frac{EV_r \times ED_c \times EF_r \times SA_c}{BW_c} + \frac{EV_r \times ED_a \times EF_r \times SA_a}{BW_z}\right)\right] + \left[MAF_O \times \left(\begin{array}{l}\frac{EV_r \times ED_{0-2} \times EF_r \times SA_c \times ADAF_{0-2}}{BW_c} + \frac{EV_r \times ED_{2-6} \times EF_r \times SA_c \times ADAF_{2-6}}{BW_c} \\ + \frac{EV_r \times ED_{6-16} \times EF_r \times SA_a \times ADAF_{6-16}}{BW_a} + \frac{EV_r \times ED_{16-26} \times EF_r \times SA_a \times ADAF_{16-26}}{BW_a}\end{array}\right)\right]\right\}}$$

Vinyl Chloride:

$$DA_{event,(vinyl\ chloride)} = \frac{TR}{\left(\frac{SF_D \times EF_r \times \left(\frac{EV_r \times ED_c \times SA_c}{BW_c} + \frac{EV_r \times ED_a \times SA_a}{BW_a}\right)}{AT_c \times 365\frac{day}{year} \times CF_{d1}} + \frac{SF_D \times EV_r \times SA_c}{BW_c \times CF_{d1}}\right)}$$

Noncancer:

$$DA_{event,(child,noncarcinogen)} = \frac{THQ \times BW_c \times AT_{nc,c} \times 365\frac{day}{year} \times CF_{d1}}{\frac{1}{RfD_D} \times EV_r \times ED_c \times EF_r \times SA_c}$$

		USEPA									DTSC-Modified							
Analyte	**Mutagen?**	**GI Absorption** (*dimensionless*)	**SF_D** (*mg/kg-day*)$^{-1}$	**RfD_d** (*mg/kg-day*)	**$DA_{event(child, noncarcinogen)}$** (µg/cm^2-*event*)	**$DA_{event(adult, carcinogen)}$** (µg/cm^2-*event*)	**$DA_{event(adult, mutagen)}$** (µg/cm^2-*event*)	**$DA_{vent,(adult, trichloroethene)}$** (µg/cm^2-*event*)	**$DA_{event(adult, vinyl chloride)}$** (µg/cm^2-*event*)	**GI Absorption** (*dimensionless*)	**SF_D** (*mg/kg-day*)$^{-1}$	**RfD_d** (*mg/kg-day*)	**$DA_{event(child, noncarcinogen)}$** (µg/cm^2-*event*)	**$DA_{event(adult, carcinogen)}$** (µg/cm^2-*event*)	**$DA_{event(adult, mutagen)}$** (µg/cm^2-*event*)	**$DA_{vent,(adult, trichloroethene)}$** (µg/cm^2-*event*)	**$DA_{event(adult, vinyl chloride)}$** (µg/cm^2-*event*)
USEPA RSL Analytes																		
Acetophenone		1.00E+00	--	1.00E-01	2.45E-01	--	--	--	--	1.00E+00	--	1.00E-01	2.45E-01	--	--	--	--
Acrylamide	M	1.00E+00	5.00E-01	2.00E-03	4.91E-03	--	6.07E-06	--	--	1.00E+00	4.50E+00	2.00E-03	4.91E-03	--	6.74E-07	--	--
Acrylonitrile		1.00E+00	5.40E-01	4.00E-02	9.81E-02	1.74E-05	--	--	--	1.00E+00	1.00E+00	4.00E-02	9.81E-02	9.39E-06	--	--	--
Aldrin		1.00E+00	1.70E+01	3.00E-05	7.36E-05	5.52E-07	--	--	--	1.00E+00	1.70E+01	3.00E-05	7.36E-05	5.52E-07	--	--	--
Arsenic, Inorganic		1.00E+00	1.50E+00	3.00E-04	7.36E-04	6.26E-06	--	--	--	1.00E+00	9.50E+00	3.50E-06	8.58E-06	9.88E-07	--	--	--
Benzaldehyde		1.00E+00	--	1.00E-01	2.45E-01	--	--	--	--	1.00E+00	--	1.00E-01	2.45E-01	--	--	--	--
Benzene		1.00E+00	5.50E-02	4.00E-03	9.81E-03	1.71E-04	--	--	--	1.00E+00	1.00E-01	4.00E-03	9.81E-03	9.39E-05	--	--	--
Benzenethiol		1.00E+00	--	1.00E-03	2.45E-03	--	--	--	--	1.00E+00	--	1.00E-03	2.45E-03	--	--	--	--
Beryllium and compounds		7.00E-03	--	1.40E-05	3.43E-05	--	--	--	--	7.00E-03	--	1.40E-06	3.43E-06	--	--	--	--
Bis(2-chloro-1-methylethyl) ether		1.00E+00	--	4.00E-02	9.81E-02	--	--	--	--	1.00E+00	--	4.00E-02	9.81E-02	--	--	--	--
Bromodichloromethane		1.00E+00	6.20E-02	2.00E-02	4.91E-02	1.51E-04	--	--	--	1.00E+00	1.30E-01	2.00E-02	4.91E-02	7.22E-05	--	--	--
Bromoform		1.00E+00	7.90E-03	2.00E-02	4.91E-02	1.19E-03	--	--	--	1.00E+00	1.10E-02	2.00E-02	4.91E-02	8.53E-04	--	--	--
Butanol, N-		1.00E+00	--	1.00E-01	2.45E-01	--	--	--	--	1.00E+00	--	1.00E-01	2.45E-01	--	--	--	--
Butylbenzene, n-		1.00E+00	--	5.00E-02	1.23E-01	--	--	--	--	1.00E+00	--	5.00E-02	1.23E-01	--	--	--	--
Butylbenzene, sec-		1.00E+00	--	1.00E-01	2.45E-01	--	--	--	--	1.00E+00	--	1.00E-01	2.45E-01	--	--	--	--
Carbon Tetrachloride		1.00E+00	7.00E-02	4.00E-03	9.81E-03	1.34E-04	--	--	--	1.00E+00	1.50E-01	4.00E-03	9.81E-03	6.26E-05	--	--	--
Chloral Hydrate		1.00E+00	--	1.00E-01	2.45E-01	--	--	--	--	1.00E+00	--	1.00E-01	2.45E-01	--	--	--	--
Chlordane		1.00E+00	3.50E-01	5.00E-04	1.23E-03	2.68E-05	--	--	--	1.00E+00	1.30E+00	5.00E-04	1.23E-03	7.22E-06	--	--	--
Chloroacetaldehyde, 2-		1.00E+00	2.70E-01	--	--	3.48E-05	--	--	--	1.00E+00	2.70E-01	--	--	3.48E-05	--	--	--
Chloroethanol, 2-		1.00E+00	--	2.00E-02	4.91E-02	--	--	--	--	1.00E+00	--	2.00E-02	4.91E-02	--	--	--	--
Chlorophenol, 2-		1.00E+00	--	5.00E-03	1.23E-02	--	--	--	--	1.00E+00	--	5.00E-03	1.23E-02	--	--	--	--
Crotonaldehyde, trans-		1.00E+00	1.90E+00	1.00E-03	2.45E-03	4.94E-06	--	--	--	1.00E+00	1.90E+00	1.00E-03	2.45E-03	4.94E-06	--	--	--
Cyanides																		
~Cyanogen		1.00E+00	--	1.00E-03	2.45E-03	--	--	--	--	1.00E+00	--	1.00E-03	2.45E-03	--	--	--	--
~Cyanogen Bromide		1.00E+00	--	9.00E-02	2.21E-01	--	--	--	--	1.00E+00	--	9.00E-02	2.21E-01	--	--	--	--
~Cyanogen Chloride		1.00E+00	--	5.00E-02	1.23E-01	--	--	--	--	1.00E+00	--	5.00E-02	1.23E-01	--	--	--	--
~Thiocyanic Acid		1.00E+00	--	2.00E-04	4.91E-04	--	--	--	--	1.00E+00	--	2.00E-04	4.91E-04	--	--	--	--
Cyclohexylamine		1.00E+00	--	2.00E-01	4.91E-01	--	--	--	--	1.00E+00	--	2.00E-01	4.91E-01	--	--	--	--
Dibromochloromethane		1.00E+00	8.40E-02	2.00E-02	4.91E-02	1.12E-04	--	--	--	1.00E+00	8.40E-02	2.00E-02	4.91E-02	1.12E-04	--	--	--
Dibromoethane, 1,2-		1.00E+00	2.00E+00	9.00E-03	2.21E-02	4.69E-06	--	--	--	1.00E+00	3.60E+00	9.00E-03	2.21E-02	2.61E-06	--	--	--
Dichloroethane, 1,1-		1.00E+00	5.70E-03	2.00E-01	4.91E-01	1.65E-03	--	--	--	1.00E+00	5.70E-03	2.00E-01	4.91E-01	1.65E-03	--	--	--
Dichloroethylene, 1,2-cis-		1.00E+00	--	2.00E-03	4.91E-03	--	--	--	--	1.00E+00	--	2.00E-03	4.91E-03	--	--	--	--
Dichloroethylene, 1,2-trans-		1.00E+00	--	2.00E-02	4.91E-02	--	--	--	--	1.00E+00	--	2.00E-02	4.91E-02	--	--	--	--
Dichloropropane, 1,3-		1.00E+00	--	2.00E-02	4.91E-02	--	--	--	--	1.00E+00	--	2.00E-02	4.91E-02	--	--	--	--
Diethylformamide		1.00E+00	--	1.00E-03	2.45E-03	--	--	--	--	1.00E+00	--	1.00E-03	2.45E-03	--	--	--	--
Diisopropyl Methylphosphonate		1.00E+00	--	8.00E-02	1.96E-01	--	--	--	--	1.00E+00	--	8.00E-02	1.96E-01	--	--	--	--
Dimethylaniline, N,N-		1.00E+00	--	2.00E-03	4.91E-03	--	--	--	--	1.00E+00	--	2.00E-03	4.91E-03	--	--	--	--
Dithiane, 1,4-		1.00E+00	--	1.00E-02	2.45E-02	--	--	--	--	1.00E+00	--	1.00E-02	2.45E-02	--	--	--	--
Endosulfan		1.00E+00	--	6.00E-03	1.47E-02	--	--	--	--	1.00E+00	--	6.00E-03	1.47E-02	--	--	--	--
Epichlorohydrin		1.00E+00	9.90E-03	6.00E-03	1.47E-02	9.48E-04	--	--	--	1.00E+00	8.00E-02	6.00E-03	1.47E-02	1.17E-04	--	--	--

Table B-4. Derivation of Dermally-Absorbed Dose per Event: Domestic Use of Water -- Residential Scenario

Definition	Variable	USEPA Value	DTSC Value	
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	dimensionless
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	dimensionless
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	dimensionless
Age-dependent Adjustment Factor, 16-26	$ADAF_{16-26}$	1	1	dimensionless
Averaging Time, Carcinogens	AT_c	70	70	yrs
Averaging Time, Noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
Averaging Time, Noncarcinogens, adult	$AT_{nc,a}$	20	20	yrs
Body Weight, adult	BW_a	80	80	kg
Body Weight, child	BW_c	15	15	kg
Carcinogenic Adjustment Factor, oral exposure	CAF_O	0.804	0.804	dimensionless
Conversion factor, dermal	CF_{d1}	1000	1000	µg/mg
COPC Absorbed Dose per Event	DA_{event}	chemical and receptor-specific		µg/cm^2-event
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-26	ED_{16-26}	10	10	yrs
Exposure Duration, adult	ED_a	20	20	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Event Frequency, resident	EV_r	1	1	events/day
Mutagenic Adjustment Factor, oral exposure	MAF_O	0.202	0.202	dimensionless
Oral Reference Dose Adjusted for GI Absorption	RfD_d	chemical-specific		(mg/kg-day)
Exposed Body Surface Area, adult	SA_a	20900	20900	cm^2
Exposed Body Surface Area, child	SA_c	6378	6378	cm^2
Oral Slope Factor Adjusted for GI Absorption	SF_D	chemical-specific		(mg/kg-day)$^{-1}$
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless

Equations

Cancer Risk:

Carcinogens:

$$DA_{event,(carcinogen)} = \frac{TR \times AT_c \times 365\frac{day}{year} \times CF_{d1}}{SF_D \times EF_r \times \left(\frac{EV_r \times ED_c \times SA_c}{BW_c} + \frac{EV_r \times ED_a \times SA_a}{BW_a}\right)}$$

Mutagens:

$$DA_{event,(mutagen)} = \frac{TR \times AT_c \times 365\frac{day}{year} \times CF_{d1}}{SF_d \times EF_r \times \left(\begin{array}{l}\frac{EV_r \times ED_{0-2} \times SA_c \times ADAF_{0-2}}{BW_c} + \frac{EV_r \times ED_{2-6} \times SA_c \times ADAF_{2-6}}{BW_c} \\ + \frac{EV_r \times ED_{6-16} \times SA_a \times ADAF_{6-16}}{BW_a} + \frac{EV_r \times ED_{16-26} \times SA_a \times ADAF_{16-26}}{BW_a}\end{array}\right)}$$

Trichloroethene:

$$DA_{event,(trichloroethene)} = \frac{TR \times AT_c \times 365\frac{day}{year} \times CF_{d1}}{SF_d \times \left\{\left[CAF_O \times \left(\frac{EV_r \times ED_c \times EF_r \times SA_c}{BW_c} + \frac{EV_r \times ED_a \times EF_r \times SA_a}{BW_z}\right)\right] + \left[MAF_O \times \left(\begin{array}{l}\frac{EV_r \times ED_{0-2} \times EF_r \times SA_c \times ADAF_{0-2}}{BW_c} + \frac{EV_r \times ED_{2-6} \times EF_r \times SA_c \times ADAF_{2-6}}{BW_c} \\ + \frac{EV_r \times ED_{6-16} \times EF_r \times SA_a \times ADAF_{6-16}}{BW_a} + \frac{EV_r \times ED_{16-26} \times EF_r \times SA_a \times ADAF_{16-26}}{BW_a}\end{array}\right)\right]\right\}}$$

Vinyl Chloride:

$$DA_{event,(vinyl\ chloride)} = \frac{TR}{\left(\frac{SF_D \times EF_r \times \left(\frac{EV_r \times ED_c \times SA_c}{BW_c} + \frac{EV_r \times ED_a \times SA_a}{BW_a}\right)}{AT_c \times 365\frac{day}{year} \times CF_{d1}} + \frac{SF_D \times EV_r \times SA_c}{BW_c \times CF_{d1}}\right)}$$

Noncancer:

$$DA_{event,(child,noncarcinogen)} = \frac{THQ \times BW_c \times AT_{nc,c} \times 365\frac{day}{year} \times CF_{d1}}{\frac{1}{RfD_D} \times EV_r \times ED_c \times EF_r \times SA_c}$$

		USEPA								DTSC-Modified							
Analyte	**Mutagen?**	**GI Absorption** (*dimensionless*)	**SF_D** (*mg/kg-day*)$^{-1}$	**RfD_d** (*mg/kg-day*)	**$DA_{event(child, noncarcinogen)}$** (µg/cm^2-*event*)	**$DA_{event(adult, carcinogen)}$** (µg/cm^2-*event*)	**$DA_{event(adult, mutagen)}$** (µg/cm^2-*event*)	**$DA_{vent,(adult, trichloroethene)}$** (µg/cm^2-*event*)	**$DA_{event(adult, vinyl chloride)}$** (µg/cm^2-*event*)	**GI Absorption** (*dimensionless*)	**SF_D** (*mg/kg-day*)$^{-1}$	**RfD_d** (*mg/kg-day*)	**$DA_{event(child, noncarcinogen)}$** (µg/cm^2-*event*)	**$DA_{event(adult, carcinogen)}$** (µg/cm^2-*event*)	**$DA_{event(adult, mutagen)}$** (µg/cm^2-*event*)	**$DA_{vent,(adult, trichloroethene)}$** (µg/cm^2-*event*)	**$DA_{event(adult, vinyl chloride)}$** (µg/cm^2-*event*)
Ethyl Ether		1.00E+00	--	2.00E-01	4.91E-01	--	--	--	--	1.00E+00	--	2.00E-01	4.91E-01	--	--	--	--
Ethylene Diamine		1.00E+00	--	9.00E-02	2.21E-01	--	--	--	--	1.00E+00	--	9.00E-02	2.21E-01	--	--	--	--
Furans																	
~Furan		1.00E+00	--	1.00E-03	2.45E-03	--	--	--	--	1.00E+00	--	1.00E-03	2.45E-03	--	--	--	--
Guanidine		1.00E+00	--	1.00E-02	2.45E-02	--	--	--	--	1.00E+00	--	1.00E-02	2.45E-02	--	--	--	--
Hexabromobenzene		1.00E+00	--	2.00E-03	4.91E-03	--	--	--	--	1.00E+00	--	2.00E-03	4.91E-03	--	--	--	--
Hexachlorobenzene		1.00E+00	1.60E+00	8.00E-04	1.96E-03	5.87E-06	--	--	--	1.00E+00	1.80E+00	8.00E-04	1.96E-03	5.22E-06	--	--	--
Hexachlorocyclohexane, Gamma- (Lindane)		1.00E+00	1.10E+00	3.00E-04	7.36E-04	8.53E-06	--	--	--	1.00E+00	1.10E+00	3.00E-04	7.36E-04	8.53E-06	--	--	--
Isobutyl Alcohol		1.00E+00	--	3.00E-01	7.36E-01	--	--	--	--	1.00E+00	--	3.00E-01	7.36E-01	--	--	--	--
Lead Compounds																	
~Lead subacetate		1.00E+00	8.50E-03	--	--	1.10E-03	--	--	--	1.00E+00	3.80E-02	--	--	2.47E-04	--	--	--
Lewisite		1.00E+00	--	5.00E-06	1.23E-05	--	--	--	--	1.00E+00	--	5.00E-06	1.23E-05	--	--	--	--
Mercury Compounds																	
~Mercury (elemental)		1.00E+00	--	--	--	--	--	--	--	1.00E+00	--	1.60E-04	3.92E-04	--	--	--	--
Merphos		1.00E+00	--	3.00E-05	7.36E-05	--	--	--	--	1.00E+00	--	3.00E-05	7.36E-05	--	--	--	--
Methyl Acetate		1.00E+00	--	1.00E+00	2.45E+00	--	--	--	--	1.00E+00	--	1.00E+00	2.45E+00	--	--	--	--
Methylene Chloride	M	1.00E+00	2.00E-03	6.00E-03	1.47E-02	--	1.52E-03	--	--	1.00E+00	1.40E-02	6.00E-03	1.47E-02	--	2.17E-04	--	--
Methylene-bis(2-chloroaniline), 4,4'-	M	1.00E+00	1.00E-01	2.00E-03	4.91E-03	--	3.03E-05	--	--	1.00E+00	1.50E+00	2.00E-03	4.91E-03	--	2.02E-06	--	--
Mineral oils		1.00E+00	--	3.00E+00	7.36E+00	--	--	--	--	1.00E+00	--	3.00E+00	7.36E+00	--	--	--	--
Mirex		1.00E+00	1.80E+01	2.00E-04	4.91E-04	5.22E-07	--	--	--	1.00E+00	1.80E+01	2.00E-04	4.91E-04	5.22E-07	--	--	--
Naled		1.00E+00	--	2.00E-03	4.91E-03	--	--	--	--	1.00E+00	--	2.00E-03	4.91E-03	--	--	--	--
Nitrotoluene, o-		1.00E+00	2.20E-01	9.00E-04	2.21E-03	4.27E-05	--	--	--	1.00E+00	2.20E-01	9.00E-04	2.21E-03	4.27E-05	--	--	--
Pentabromodiphenyl Ether		1.00E+00	--	2.00E-03	4.91E-03	--	--	--	--	1.00E+00	--	2.00E-03	4.91E-03	--	--	--	--
Pentachloroethane		1.00E+00	9.00E-02	--	--	1.04E-04	--	--	--	1.00E+00	9.00E-02	--	--	1.04E-04	--	--	--
Perfluorobutane Sulfonate		1.00E+00	--	2.00E-02	4.91E-02	--	--	--	--	1.00E+00	--	2.00E-02	4.91E-02	--	--	--	--
Phosphorus, White		1.00E+00	--	2.00E-05	4.91E-05	--	--	--	--	1.00E+00	--	2.00E-05	4.91E-05	--	--	--	--
Phthalates																	
~Dimethylterephthalate		1.00E+00	--	1.00E-01	2.45E-01	--	--	--	--	1.00E+00	--	1.00E-01	2.45E-01	--	--	--	--
Polychlorinated Biphenyls (PCBs)																	
~Aroclor 1016		1.00E+00	7.00E-02	7.00E-05	1.72E-04	1.34E-04	--	--	--	1.00E+00	7.00E-02	7.00E-05	1.72E-04	1.34E-04	--	--	--
~Aroclor 1254		1.00E+00	2.00E+00	2.00E-05	4.91E-05	4.69E-06	--	--	--	1.00E+00	2.00E+00	2.00E-05	4.91E-05	4.69E-06	--	--	--
~Aroclor 5460		1.00E+00	--	6.00E-04	1.47E-03	--	--	--	--	1.00E+00	--	6.00E-04	1.47E-03	--	--	--	--
Propargyl Alcohol		1.00E+00	--	2.00E-03	4.91E-03	--	--	--	--	1.00E+00	--	2.00E-03	4.91E-03	--	--	--	--
Pyridine		1.00E+00	--	1.00E-03	2.45E-03	--	--	--	--	1.00E+00	--	1.00E-03	2.45E-03	--	--	--	--
Tetrachloroethane, 1,1,2,2-		1.00E+00	2.00E-01	2.00E-02	4.91E-02	4.69E-05	--	--	--	1.00E+00	2.70E-01	2.00E-02	4.91E-02	3.48E-05	--	--	--
Tetrachloroethylene		1.00E+00	2.10E-03	6.00E-03	1.47E-02	4.47E-03	--	--	--	1.00E+00	5.40E-01	6.00E-03	1.47E-02	1.74E-05	--	--	--
Trichloroethane, 1,1,1-		1.00E+00	--	2.00E+00	4.91E+00	--	--	--	--	1.00E+00	--	2.00E+00	4.91E+00	--	--	--	--
Trichlorofluoromethane		1.00E+00	--	3.00E-01	7.36E-01	--	--	--	--	1.00E+00	--	3.00E-01	7.36E-01	--	--	--	--
Trichlorophenol, 2,4,6-		1.00E+00	1.10E-02	1.00E-03	2.45E-03	8.53E-04	--	--	--	1.00E+00	7.00E-02	1.00E-03	2.45E-03	1.34E-04	--	--	--
Trichloropropane, 1,1,2-		1.00E+00	--	5.00E-03	1.23E-02	--	--	--	--	1.00E+00	--	5.00E-03	1.23E-02	--	--	--	--
Trichloropropane, 1,2,3-	M	1.00E+00	3.00E+01	4.00E-03	9.81E-03	--	1.01E-07	--	--	1.00E+00	3.00E+01	4.00E-03	9.81E-03	--	1.01E-07	--	--

Table B-4. Derivation of Dermally-Absorbed Dose per Event: Domestic Use of Water -- Residential Scenario

Definition	Variable	USEPA Value	DTSC Value	
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	dimensionless
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	dimensionless
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	dimensionless
Age-dependent Adjustment Factor, 16-26	$ADAF_{16-26}$	1	1	dimensionless
Averaging Time, Carcinogens	AT_c	70	70	yrs
Averaging Time, Noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
Averaging Time, Noncarcinogens, adult	$AT_{nc,a}$	20	20	yrs
Body Weight, adult	BW_a	80	80	kg
Body Weight, child	BW_c	15	15	kg
Carcinogenic Adjustment Factor, oral exposure	CAF_O	0.804	0.804	dimensionless
Conversion factor, dermal	CF_{d1}	1000	1000	µg/mg
COPC Absorbed Dose per Event	DA_{event}	chemical and receptor-specific		µg/cm^2-event
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-26	ED_{16-26}	10	10	yrs
Exposure Duration, adult	ED_a	20	20	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Event Frequency, resident	EV_r	1	1	events/day
Mutagenic Adjustment Factor, oral exposure	MAF_O	0.202	0.202	dimensionless
Oral Reference Dose Adjusted for GI Absorption	RfD_d	chemical-specific		(mg/kg-day)
Exposed Body Surface Area, adult	SA_a	20900	20900	cm^2
Exposed Body Surface Area, child	SA_c	6378	6378	cm^2
Oral Slope Factor Adjusted for GI Absorption	SF_D	chemical-specific		(mg/kg-day)$^{-1}$
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless

Equations

Cancer Risk:

Carcinogens:

$$DA_{event,(carcinogen)} = \frac{TR \times AT_c \times 365\frac{day}{year} \times CF_{d1}}{SF_D \times EF_r \times \left(\frac{EV_r \times ED_c \times SA_c}{BW_c} + \frac{EV_r \times ED_a \times SA_a}{BW_a}\right)}$$

Mutagens:

$$DA_{event,(mutagen)} = \frac{TR \times AT_c \times 365\frac{day}{year} \times CF_{d1}}{SF_d \times EF_r \times \left(\begin{array}{l}\frac{EV_r \times ED_{0-2} \times SA_c \times ADAF_{0-2}}{BW_c} + \frac{EV_r \times ED_{2-6} \times SA_c \times ADAF_{2-6}}{BW_c} \\ + \frac{EV_r \times ED_{6-16} \times SA_a \times ADAF_{6-16}}{BW_a} + \frac{EV_r \times ED_{16-26} \times SA_a \times ADAF_{16-26}}{BW_a}\end{array}\right)}$$

Trichloroethene:

$$DA_{event,(trichloroethene)} = \frac{TR \times AT_c \times 365\frac{day}{year} \times CF_{d1}}{SF_d \times \left\{\left[CAF_O \times \left(\frac{EV_r \times ED_c \times EF_r \times SA_c}{BW_c} + \frac{EV_r \times ED_a \times EF_r \times SA_a}{BW_z}\right)\right] + \left[MAF_O \times \left(\begin{array}{l}\frac{EV_r \times ED_{0-2} \times EF_r \times SA_c \times ADAF_{0-2}}{BW_c} + \frac{EV_r \times ED_{2-6} \times EF_r \times SA_c \times ADAF_{2-6}}{BW_c} \\ + \frac{EV_r \times ED_{6-16} \times EF_r \times SA_a \times ADAF_{6-16}}{BW_a} + \frac{EV_r \times ED_{16-26} \times EF_r \times SA_a \times ADAF_{16-26}}{BW_a}\end{array}\right)\right]\right\}}$$

Vinyl Chloride:

$$DA_{event,(vinyl\ chloride)} = \frac{TR}{\left(\frac{SF_D \times EF_r \times \left(\frac{EV_r \times ED_c \times SA_c}{BW_c} + \frac{EV_r \times ED_a \times SA_a}{BW_a}\right)}{AT_c \times 365\frac{day}{year} \times CF_{d1}} + \frac{SF_D \times EV_r \times SA_c}{BW_c \times CF_{d1}}\right)}$$

Noncancer:

$$DA_{event,(child,noncarcinogen)} = \frac{THQ \times BW_c \times AT_{nc,c} \times 365\frac{day}{year} \times CF_{d1}}{\frac{1}{RfD_D} \times EV_r \times ED_c \times EF_r \times SA_c}$$

		USEPA								DTSC-Modified							
Analyte	**Mutagen?**	**GI Absorption** (*dimensionless*)	**SF_D** (*mg/kg-day*)$^{-1}$	**RfD_d** (*mg/kg-day*)	**$DA_{event(child, noncarcinogen)}$** (µg/cm^2-*event*)	**$DA_{event(adult, carcinogen)}$** (µg/cm^2-*event*)	**$DA_{event(adult, mutagen)}$** (µg/cm^2-*event*)	**$DA_{event,(adult, trichloroethene)}$** (µg/cm^2-*event*)	**$DA_{event(adult, vinyl chloride)}$** (µg/cm^2-*event*)	**GI Absorption** (*dimensionless*)	**SF_D** (*mg/kg-day*)$^{-1}$	**RfD_d** (*mg/kg-day*)	**$DA_{event(child, noncarcinogen)}$** (µg/cm^2-*event*)	**$DA_{event(adult, carcinogen)}$** (µg/cm^2-*event*)	**$DA_{event(adult, mutagen)}$** (µg/cm^2-*event*)	**$DA_{event,(adult, trichloroethene)}$** (µg/cm^2-*event*)	**$DA_{event(adult, vinyl chloride)}$** (µg/cm^2-*event*)
Additional Analytes																	
Beryllium Sulfate		7.00E-03	--	1.40E-05	3.43E-05	--	--	--	--	7.00E-03	--	1.40E-06	3.43E-06	--	--	--	--
Dichlorobenzene, 1,3-		1.00E+00	--	--	--	--	--	--	--	1.00E+00	--	3.00E-02	7.36E-02	--	--	--	--
Methylcyclohexane		1.00E+00	--	--	--	--	--	--	--	1.00E+00	--	--	--	--	--	--	--

"--" = no value

Table B-5. USEPA RSLs and DTSC-SLs for a Residential Receptor Exposed Dermally during Domestic Use of Tap Water

Definition	Variable	USEPA Value	DTSC Value	Units
Relative contribution of permeability coefficients in stratum corneum and viable epidermis	B	Calculated (Equation 3)		dimensionless
Correlation coefficient	b	Calculated (Equation 4)		dimensionless
Correlation coefficient	c	Calculated (Equation 4)		dimensionless
Conversion factor, dermal	CF_{d2}	1000	1000	cm^3/L
Effective diffusion coefficient, through the stratum corneum	D_{sc}	Calculated (Equation 2)		cm^2/hr
Dose absorbed per unit area per event	DA_{event}	Calculated		$\mu g/cm^2$-event
Exposure Duration, adult	ED_a	20	20	yrs
Exposure Duration, child	ED_c	6	6	yrs
Fraction Absorbed, resident	FA_r	Chemical-specific		dimensionless
Permeability coefficient from water (organics only)	K_p	Calculated (Equation 1)		cm/hr
Octanol:water partition coefficient	K_{ow}	Chemical-specific		dimensionless
Thickness of the strateum corneum	l_{sc}	0.001	0.001	cm
Molecular weight	MW	Chemical-specific		g/mole
(Regional) Screening Level, dermal	$(R)SL_D$	derived herein		µg/L
Lag time per event	τ_{event}	Calculated (Equation 2)		hr/event
Time it takes to reach steady state	t*	Calculated (Equation 4)		hr
Duration of event, child	$t_{event,child}$	0.54	0.54	hr/event
Duration of event, adult	$t_{event,adult}$	0.71	0.71	hr/event
Duration of event, adjusted lifetime	$t_{event,lifetime}$	Calculated (Equation 4)		hr/event

Intermediate Equations

1) $K_p = 10^{(-2.805063+0.6645865 LogK_{OW}-0.0056118MW)}$

2) $\tau_{event} = \frac{(l_{sc})^2}{6D_{sc}}$

where: $D_{sc} = l_{sc} \times 10^{(-2.8-0.0056MW)}$

3) $B = K_p \frac{\sqrt{MW}}{2.6}$ (as an approximation)

4) If $B \leq 0.6$: $t^* = 2.4\tau_{event}$

If $B > 0.6$: $t^* = 6\tau_{event}\left(b - \sqrt{b^2 - c^2}\right)$

$b = \frac{2 \times (1+B)^2}{\pi} - c$

$c = \frac{1 + 3B + 3B^2}{3 \times (1+B)}$

5) $t_{event,lifetime} = \frac{t_{event,child} \times ED_c + t_{event,adult} \times ED_a}{ED_c + ED_a}$

RSL_D Derivation

Carcinogens, Mutagens, Trichloroethene, Vinyl Chloride

Inorganic: $RSL_D = \frac{DA_{event} \times CF_{d2}}{K_p \times t_{event,lifetime}}$

Organic (if $t_{event,lifetime} \leq t^*$): $RSL_D = \frac{DA_{event} \times CF_{d2}}{2FA_r \times K_p \times \left(\sqrt{\frac{6\tau_{event} \times t_{event,lifetime}}{\pi}}\right)}$

Organic (if $t_{event,lifetime} > t^*$): $RSL_D = \frac{DA_{event} \times CF_{d2}}{FA_r \times K_p \times \left(\frac{t_{event,lifetime}}{1+B} + (2 \times \tau_{event}) \times \frac{1+3B+3B^2}{(1+B)^2}\right)}$

Noncarcinogen:

Inorganic: $RSL_D = \frac{DA_{event,(child,noncarcinogen)} \times CF_{d2}}{K_p \times t_{event,child}}$

Organic (if $t_{event,child} \leq t^*$): $RSL_D = \frac{DA_{event,(child,noncarcinogen)} \times CF_{d2}}{2FA_r \times K_p \times \left(\sqrt{\frac{6\tau_{event} \times t_{event,child}}{\pi}}\right)}$

Organic (if $t_{event,child} > t^*$): $RSL_D = \frac{DA_{event,(child,noncarcinogen)} \times CF_{d2}}{FA_r \times K_p \times \left(\frac{t_{event,child}}{1+B} + (2 \times \tau_{event}) \times \frac{1+3B+3B^2}{(1+B)^2}\right)}$

Analyte	Mutagen?	MW (g/mole)	$LogK_{OW}$ (dimensionless)	Kp^a (cm/hr)	USEPA τ_{event} (hr/event)	DTSC-Modified τ_{event} (hr/event)	B (dimensionless)	c (dimensionless)	b (dimensionless)	USEPA t* (hr)	DTSC-Modified t* (hr)	FA_r (dimensionless)	Residential USEPA RSL_D (µg/L) Carcinogen	Residential USEPA RSL_D (µg/L) Noncarcinogen	Residential DTSC-SL_D (µg/L) Carcinogen	Residential DTSC-SL_D (µg/L) Noncarcinogen
USEPA RSL Analytes																
Acetophenone		120.15	1.58E+00	3.72E-03	4.95E-01	4.95E-01	1.57E-02	3.44E-01	3.13E-01	1.19E+00	1.19E+00	1	--	4.61E+04	--	4.61E+04
Acrylamide	M	71.079	-6.70E-01	2.24E-04	2.63E-01	2.63E-01	7.27E-04	3.34E-01	3.04E-01	6.31E-01	6.31E-01	1	2.26E+01	2.10E+04	2.51E+00	2.10E+04
Acrylonitrile		53.064	2.50E-01	1.16E-03	2.08E-01	2.08E-01	3.24E-03	3.35E-01	3.05E-01	5.00E-01	5.00E-01	1	1.38E+01	8.87E+04	7.47E+00	8.87E+04
Aldrin		364.92	6.50E+00	NRP	1.16E+01	1.16E+01	--	--	--	--	--	1	--	--	--	--
Arsenic, Inorganic		77.946	--	1.00E-03	--	--	--	--	--	--	--	1	9.33E+00	1.36E+03	1.47E+00	1.59E+01
Benzaldehyde		106.13	1.48E+00	3.83E-03	4.13E-01	4.13E-01	1.52E-02	3.44E-01	3.13E-01	9.92E-01	9.92E-01	1	--	4.91E+04	--	4.91E+04
Benzene		78.115	2.13E+00	1.49E-02	2.88E-01	2.88E-01	5.05E-02	3.68E-01	3.35E-01	6.91E-01	6.91E-01	1	9.45E+00	6.06E+02	5.20E+00	6.06E+02
Benzenethiol		110.18	2.52E+00	1.78E-02	4.35E-01	4.35E-01	7.20E-02	3.83E-01	3.49E-01	1.04E+00	1.04E+00	1	--	1.03E+02	--	1.03E+02
Beryllium and compounds		11.028	--	1.00E-03	--	--	--	--	--	--	--	1	--	6.36E+01	--	6.36E+00
Bis(2-chloro-1-methylethyl) ether		171.07	2.48E+00	7.64E-03	9.55E-01	9.55E-01	3.84E-02	3.59E-01	3.27E-01	2.29E+00	2.29E+00	1	--	6.47E+03	--	6.47E+03
Bromodichloromethane		163.83	2.00E+00	4.02E-03	8.70E-01	8.70E-01	1.98E-02	3.47E-01	3.15E-01	2.09E+00	2.09E+00	1	1.78E+01	6.44E+03	8.50E+00	6.44E+03
Bromoform		252.73	2.40E+00	2.35E-03	2.74E+00	2.74E+00	1.44E-02	3.43E-01	3.12E-01	6.57E+00	6.57E+00	1	1.35E+02	6.20E+03	9.69E+01	6.20E+03
Butanol, N-		74.124	8.80E-01	2.31E-03	2.73E-01	2.73E-01	7.65E-03	3.38E-01	3.08E-01	6.56E-01	6.56E-01	1	--	9.99E+04	--	9.99E+04
Butylbenzene, n-		134.22	4.38E+00	NRP	5.94E-01	5.94E-01	--	--	--	--	--	1	--	--	--	--
Butylbenzene, sec-		134.22	4.57E+00	NRP	5.94E-01	5.94E-01	--	--	--	--	--	1	--	--	--	--
Carbon Tetrachloride		153.82	2.83E+00	1.63E-02	7.64E-01	7.64E-01	7.78E-02	3.87E-01	3.52E-01	1.83E+00	1.83E+00	1	4.15E+00	3.39E+02	1.94E+00	3.39E+02
Chloral Hydrate		165.4	9.90E-01	8.41E-04	8.87E-01	8.87E-01	4.16E-03	3.36E-01	3.06E-01	2.13E+00	2.13E+00	1	--	1.52E+05	--	1.52E+05
Chlordane		409.78	6.26E+00	NRP	2.07E+01	2.07E+01	--	--	--	--	--	0.7	--	--	--	--
Chloroacetaldehyde, 2-		78.499	9.00E-02	6.52E-04	2.89E-01	2.89E-01	2.22E-03	3.35E-01	3.05E-01	6.94E-01	6.94E-01	1	4.38E+01	--	4.38E+01	--
Chloroethanol, 2-		80.515	3.00E-02	5.79E-04	2.97E-01	2.97E-01	2.00E-03	3.35E-01	3.05E-01	7.13E-01	7.13E-01	1	--	7.65E+04	--	7.65E+04
Chlorophenol, 2-		128.56	2.15E+00	7.99E-03	5.52E-01	5.52E-01	3.48E-02	3.57E-01	3.25E-01	1.32E+00	1.32E+00	1	--	1.02E+03	--	1.02E+03
Crotonaldehyde, trans-		70.092	6.00E-01	1.59E-03	2.60E-01	2.60E-01	5.11E-03	3.37E-01	3.06E-01	6.23E-01	6.23E-01	1	2.62E+00	1.49E+03	2.62E+00	1.49E+03
Cyanides																
~Cyanogen		52.036	7.00E-02	8.90E-04	2.06E-01	2.06E-01	2.47E-03	3.35E-01	3.05E-01	4.94E-01	4.94E-01	1	--	5.10E+03	--	5.10E+03
~Cyanogen Bromide		105.93	--	2.55E-04	--	--	--	--	--	--	--	1	--	1.60E+06	--	1.60E+06
~Cyanogen Chloride		61.471	--	3.94E-04	--	--	--	--	--	--	--	1	--	5.76E+05	--	5.76E+05
~Thiocyanic Acid		59.09	5.80E-01	1.00E-03	2.25E-01	2.25E-01	2.96E-03	3.35E-01	3.05E-01	5.41E-01	5.41E-01	1	--	9.08E+02	--	9.08E+02
Cyclohexylamine		99.177	1.49E+00	4.25E-03	3.78E-01	3.78E-01	1.63E-02	3.44E-01	3.13E-01	9.07E-01	9.07E-01	1	--	9.24E+04	--	9.24E+04
Dibromochloromethane		208.28	2.16E+00	2.89E-03	1.54E+00	1.54E+00	1.61E-02	3.44E-01	3.13E-01	3.70E+00	3.70E+00	1	1.37E+01	6.72E+03	1.37E+01	6.72E+03
Dibromoethane, 1,2-		187.86	1.96E+00	2.78E-03	1.19E+00	1.19E+00	1.46E-02	3.43E-01	3.12E-01	2.84E+00	2.84E+00	1	6.86E-01	3.60E+03	3.81E-01	3.60E+03
Dichloroethane, 1,1-		98.96	1.79E+00	6.75E-03	3.77E-01	3.77E-01	2.58E-02	3.51E-01	3.19E-01	9.04E-01	9.04E-01	1	1.76E+02	5.83E+04	1.76E+02	5.83E+04
Dichloroethylene, 1,2-cis-		96.944	1.86E+00	7.71E-03	3.67E-01	3.67E-01	2.92E-02	3.53E-01	3.21E-01	8.81E-01	8.81E-01	1	--	5.17E+02	--	5.17E+02
Dichloroethylene, 1,2-trans-		96.944	2.09E+00	1.10E-02	3.67E-01	3.67E-01	4.15E-02	3.62E-01	3.29E-01	8.81E-01	8.81E-01	1	--	3.64E+03	--	3.64E+03
Dichloropropane, 1,3-		112.99	2.00E+00	7.76E-03	4.51E-01	4.51E-01	3.17E-02	3.55E-01	3.23E-01	1.08E+00	1.08E+00	1	--	4.63E+03	--	4.63E+03
Diethylformamide		101.15	5.00E-02	4.58E-04	3.88E-01	3.88E-01	1.77E-03	3.35E-01	3.04E-01	9.30E-01	9.30E-01	1	--	4.24E+03	--	4.24E+03
Diisopropyl Methylphosphonate		180.19	1.03E+00	7.38E-04	1.07E+00	1.07E+00	3.81E-03	3.36E-01	3.06E-01	2.58E+00	2.58E+00	1	--	1.26E+05	--	1.26E+05
Dimethylaniline, N,N-		121.18	2.31E+00	1.12E-02	5.02E-01	5.02E-01	4.75E-02	3.66E-01	3.33E-01	1.20E+00	1.20E+00	1	--	3.04E+02	--	3.04E+02
Dithiane, 1,4-		120.24	7.70E-01	1.08E-03	4.96E-01	4.96E-01	4.54E-03	3.36E-01	3.06E-01	1.19E+00	1.19E+00	1	--	1.59E+04	--	1.59E+04
Endosulfan		406.93	3.83E+00	2.86E-03	2.00E+01	2.00E+01	2.22E-02	3.48E-01	3.17E-01	4.80E+01	4.80E+01	0.9	--	6.29E+02	--	6.29E+02
Epichlorohydrin		92.526	4.50E-01	9.44E-04	3.47E-01	3.47E-01	3.49E-03	3.36E-01	3.05E-01	8.32E-01	8.32E-01	1	7.54E+02	1.30E+04	9.33E+01	1.30E+04
Ethyl Ether		74.124	8.90E-01	2.35E-03	2.73E-01	2.73E-01	7.77E-03	3.39E-01	3.08E-01	6.56E-01	6.56E-01	1	--	1.97E+05	--	1.97E+05
Ethylene Diamine		60.099	-2.04E+00	NRP	2.28E-01	2.28E-01	--	--	--	--	--	1	--	--	--	--
Furans																

Table B-5. USEPA RSLs and DTSC-SLs for a Residential Receptor Exposed Dermally during Domestic Use of Tap Water

Definition	Variable	USEPA Value	DTSC Value	Units
Relative contribution of permeability coefficients in stratum corneum and viable epidermis	B	Calculated (Equation 3)		dimensionless
Correlation coefficient	b	Calculated (Equation 4)		dimensionless
Correlation coefficient	c	Calculated (Equation 4)		dimensionless
Conversion factor, dermal	CF_{d2}	1000	1000	cm^3/L
Effective diffusion coefficient, through the stratum corneum	D_{sc}	Calculated (Equation 2)		cm^2/hr
Dose absorbed per unit area per event	DA_{event}	Calculated		$\mu g/cm^2$-event
Exposure Duration, adult	ED_a	20	20	yrs
Exposure Duration, child	ED_c	6	6	yrs
Fraction Absorbed, resident	FA_r	Chemical-specific		dimensionless
Permeability coefficient from water (organics only)	K_p	Calculated (Equation 1)		cm/hr
Octanol:water partition coefficient	K_{ow}	Chemical-specific		dimensionless
Thickness of the strateum corneum	l_{sc}	0.001	0.001	cm
Molecular weight	MW	Chemical-specific		g/mole
(Regional) Screening Level, dermal	$(R)SL_D$	derived herein		µg/L
Lag time per event	τ_{event}	Calculated (Equation 2)		hr/event
Time it takes to reach steady state	t*	Calculated (Equation 4)		hr
Duration of event, child	$t_{event,child}$	0.54	0.54	hr/event
Duration of event, adult	$t_{event,adult}$	0.71	0.71	hr/event
Duration of event, adjusted lifetime	$t_{event,lifetime}$	Calculated (Equation 4)		hr/event

Intermediate Equations

1) $K_p = 10^{(-2.805063+0.6645865 LogK_{OW}-0.0056118MW)}$

2) $\tau_{event} = \frac{(l_{sc})^2}{6D_{sc}}$

where: $D_{sc} = l_{sc} \times 10^{(-2.8-0.0056MW)}$

3) $B = K_p \frac{\sqrt{MW}}{2.6}$ (as an approximation)

4) If $B \leq 0.6$: $t^* = 2.4\tau_{event}$

If $B > 0.6$: $t^* = 6\tau_{event}\left(b - \sqrt{b^2 - c^2}\right)$

$b = \frac{2 \times (1+B)^2}{\pi} - c$

$c = \frac{1 + 3B + 3B^2}{3 \times (1+B)}$

5) $t_{event,lifetime} = \frac{t_{event,child} \times ED_c + t_{event,adult} \times ED_a}{ED_c + ED_a}$

RSL_D Derivation

Carcinogens, Mutagens, Trichloroethene, Vinyl Chloride

Inorganic: $RSL_D = \frac{DA_{event} \times CF_{d2}}{K_p \times t_{event,lifetime}}$

Organic (if $t_{event,lifetime} \leq t^*$): $RSL_D = \frac{DA_{event} \times CF_{d2}}{2FA_r \times K_p \times \left(\sqrt{\frac{6\tau_{event} \times t_{event,lifetime}}{\pi}}\right)}$

Organic (if $t_{event,lifetime} > t^*$): $RSL_D = \frac{DA_{event} \times CF_{d2}}{FA_r \times K_p \times \left(\frac{t_{event,lifetime}}{1+B} + (2 \times \tau_{event}) \times \frac{1+3B+3B^2}{(1+B)^2}\right)}$

Noncarcinogen:

Inorganic: $RSL_D = \frac{DA_{event,(child,noncarcinogen)} \times CF_{d2}}{K_p \times t_{event,child}}$

Organic (if $t_{event,child} \leq t^*$): $RSL_D = \frac{DA_{event,(child,noncarcinogen)} \times CF_{d2}}{2FA_r \times K_p \times \left(\sqrt{\frac{6\tau_{event} \times t_{event,child}}{\pi}}\right)}$

Organic (if $t_{event,child} > t^*$): $RSL_D = \frac{DA_{event,(child,noncarcinogen)} \times CF_{d2}}{FA_r \times K_p \times \left(\frac{t_{event,child}}{1+B} + (2 \times \tau_{event}) \times \frac{1+3B+3B^2}{(1+B)^2}\right)}$

Analyte	Mutagen?	MW (*g/mole*)	$LogK_{OW}$ (*dimensionless*)	Kp^a (*cm/hr*)	USEPA τ_{event} (*hr/event*)	DTSC-Modified τ_{event} (*hr/event*)	B (*dimensionless*)	c (*dimensionless*)	b (*dimensionless*)	USEPA t* (*hr*)	DTSC-Modified t* (*hr*)	FA_r (*dimensionless*)	Residential USEPA RSL_D (µg/L) Carcinogen	Residential USEPA RSL_D (µg/L) Noncarcinogen	Residential DTSC-SL_D (µg/L) Carcinogen	Residential DTSC-SL_D (µg/L) Noncarcinogen
~Furan		68.076	1.34E+00	5.05E-03	2.53E-01	2.53E-01	1.60E-02	3.44E-01	3.13E-01	6.07E-01	6.07E-01	1	--	4.75E+02	--	4.75E+02
Guanidine		59.071	-1.63E+00	6.03E-05	2.25E-01	2.25E-01	1.78E-04	3.33E-01	3.03E-01	5.41E-01	5.41E-01	1	--	4.22E+05	--	4.22E+05
Hexabromobenzene		551.49	6.07E+00	NRP	1.29E+02	1.29E+02	--	--	--	--	--	0.7	--	--	--	--
Hexachlorobenzene		284.78	5.73E+00	NRP	4.14E+00	4.14E+00	--	--	--	--	--	0.9	--	--	--	--
Hexachlorocyclohexane, Gamma- (Lindane)		290.83	3.72E+00	1.08E-02	4.47E+00	4.47E+00	7.11E-02	3.82E-01	3.48E-01	1.07E+01	1.07E+01	0.9	1.83E-01	1.76E+01	1.83E-01	1.76E+01
Isobutyl Alcohol		74.124	7.60E-01	1.92E-03	2.73E-01	2.73E-01	6.37E-03	3.38E-01	3.07E-01	6.56E-01	6.56E-01	1	--	3.60E+05	--	3.60E+05
Lead Compounds																
~Lead subacetate		805.67	-4.00E+00	NRP	3.42E+03	3.42E+03	--	--	--	--	--	1	--	--	--	--
Lewisite		207.32	2.56E+00	5.41E-03	1.52E+00	1.52E+00	2.99E-02	3.54E-01	3.22E-01	3.66E+00	3.66E+00	1	--	9.05E-01	--	9.05E-01
Mercury Compounds																
~Mercury (elemental)		200.59	6.20E-01	1.00E-03	1.40E+00	1.40E+00	5.45E-03	3.37E-01	3.07E-01	3.35E+00	3.35E+00	1	--	--	--	1.63E+02
Merphos		298.51	7.67E+00	NRP	4.94E+00	4.94E+00	--	--	--	--	--	0.3	--	--	--	--
Methyl Acetate		74.08	1.80E-01	7.92E-04	2.73E-01	2.73E-01	2.62E-03	3.35E-01	3.05E-01	6.56E-01	6.56E-01	1	--	2.92E+06	--	2.92E+06
Methylene Chloride	M	84.933	1.25E+00	3.54E-03	3.14E-01	3.14E-01	1.25E-02	3.42E-01	3.11E-01	7.55E-01	7.55E-01	1	3.38E+02	3.65E+03	4.82E+01	3.65E+03
Methylene-bis(2-chloroaniline), 4,4'-	M	267.16	3.91E+00	1.97E-02	3.30E+00	3.30E+00	1.24E-01	4.20E-01	3.84E-01	7.91E+00	7.91E+00	0.9	4.17E-01	7.51E+01	2.78E-02	7.51E+01
Mineral oils		170.34	6.10E+00	NRP	9.46E-01	9.46E-01	--	--	--	--	--	1	--	--	--	--
Mirex		545.55	6.89E+00	NRP	1.19E+02	1.19E+02	--	--	--	--	--	0.5	--	--	--	--
Naled		380.79	1.38E+00	9.44E-05	1.43E+01	1.43E+01	7.09E-04	3.34E-01	3.04E-01	3.42E+01	3.42E+01	1	--	6.77E+03	--	6.77E+03
Nitrotoluene, o-		137.14	2.30E+00	8.99E-03	6.16E-01	6.16E-01	4.05E-02	3.61E-01	3.28E-01	1.48E+00	1.48E+00	1	2.67E+00	1.54E+02	2.67E+00	1.54E+02
Pentabromodiphenyl Ether		564.69	6.84E+00	NRP	1.53E+02	1.53E+02	--	--	--	--	--	0.6	--	--	--	--
Pentachloroethane		202.3	3.22E+00	1.58E-02	1.43E+00	1.43E+00	8.66E-02	3.93E-01	3.58E-01	3.43E+00	3.43E+00	1	2.43E+00	--	2.43E+00	--
Perfluorobutane Sulfonate		300.1	2.41E+00	1.30E-03	5.04E+00	5.04E+00	8.63E-03	3.39E-01	3.09E-01	1.21E+01	1.21E+01	1	--	8.30E+03	--	8.30E+03
Phosphorus, White		33.998	3.08E+00	1.00E-03	1.63E-01	1.63E-01	2.24E-03	3.35E-01	3.05E-01	3.91E-01	3.91E-01	1	--	9.08E+01	--	9.08E+01
Phthalates																
~Dimethylterephthalate		194.19	2.25E+00	3.99E-03	1.29E+00	1.29E+00	2.14E-02	3.48E-01	3.16E-01	3.09E+00	3.09E+00	1	--	2.67E+04	--	2.67E+04
Polychlorinated Biphenyls (PCBs)																
~Aroclor 1016		549.54	5.69E+00	NRP	1.26E+02	1.26E+02	--	--	--	--	--	0	--	--	--	--
~Aroclor 1254		326.44	6.50E+00	NRP	7.08E+00	7.08E+00	--	--	--	--	--	0.5	--	--	--	--
~Aroclor 5460		291.99	6.34E+00	NRP	4.54E+00	4.54E+00	--	--	--	--	--	0.7	--	--	--	--
Propargyl Alcohol		56.065	-3.80E-01	4.24E-04	2.17E-01	2.17E-01	1.22E-03	3.34E-01	3.04E-01	5.20E-01	5.20E-01	1	--	1.19E+04	--	1.19E+04
Pyridine		79.102	6.50E-01	1.52E-03	2.92E-01	2.92E-01	5.21E-03	3.37E-01	3.06E-01	7.00E-01	7.00E-01	1	--	1.47E+03	--	1.47E+03
Tetrachloroethane, 1,1,2,2-		167.85	2.39E+00	6.94E-03	9.16E-01	9.16E-01	3.46E-02	3.57E-01	3.25E-01	2.20E+00	2.20E+00	1	3.12E+00	3.64E+03	2.31E+00	3.64E+03
Tetrachloroethylene		165.83	3.40E+00	3.34E-02	8.92E-01	8.92E-01	1.65E-01	4.51E-01	4.13E-01	2.14E+00	2.14E+00	1	6.26E+01	2.30E+02	2.43E-01	2.30E+02
Trichloroethane, 1,1,1-		133.41	2.49E+00	1.26E-02	5.87E-01	5.87E-01	5.61E-02	3.72E-01	3.38E-01	1.41E+00	1.41E+00	1	--	2.50E+05	--	2.50E+05
Trichlorofluoromethane		137.37	2.53E+00	1.27E-02	6.18E-01	6.18E-01	5.75E-02	3.73E-01	3.39E-01	1.48E+00	1.48E+00	1	--	3.61E+04	--	3.61E+04
Trichlorophenol, 2,4,6-		197.45	3.69E+00	3.46E-02	1.34E+00	1.34E+00	1.87E-01	4.68E-01	4.29E-01	3.22E+00	3.22E+00	1	9.40E+00	3.01E+01	1.48E+00	3.01E+01
Trichloropropane, 1,1,2-		147.43	2.43E+00	9.61E-03	7.04E-01	7.04E-01	4.49E-02	3.64E-01	3.31E-01	1.69E+00	1.69E+00	1	--	7.49E+02	--	7.49E+02
Trichloropropane, 1,2,3-	M	147.43	2.27E+00	7.52E-03	7.04E-01	7.04E-01	3.51E-02	3.57E-01	3.25E-01	1.69E+00	1.69E+00	1	7.08E-03	7.66E+02	7.08E-03	7.66E+02
Additional Analytes																
Beryllium Sulfate		105.07	--	1.00E-03	--	--	--	--	--	--	--	1	--	6.36E+01	--	6.36E+00
Dichlorobenzene, 1,3-		147	3.53E+00	5.20E-02	7.00E-01	7.00E-01	2.42E-01	5.11E-01	4.72E-01	1.68E+00	1.68E+00	1	--	--	--	8.33E+02
Methylcyclohexane		98.19	3.61E+00	1.10E-01	3.73E-01	3.73E-01	4.21E-01	6.55E-01	6.30E-01	8.95E-01	8.95E-01	1	--	--	--	--

[a] NRP = Not reliably predicted; the compound's chemical properties fall outside the Effective Prediction Domain for Kp (Equations 3.9 and 3.10; USEPA, 2004a).

"--" = no value

Table B-6. USEPA RSLs and DTSC-SLs for a Residential Receptor Exposed via Inhalation to Volatile Compounds during Domestic Use of Water

Definition	Variable	USEPA Value	DTSC Value	
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	dimensionless
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	dimensionless
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	dimensionless
Age-dependent Adjustment Factor, 16-26	$ADAF_{16-26}$	1	1	dimensionless
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
Carcinogenic Adjustment Factor, inhalation	CAF_I	0.756	0.756	dimensionless
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-26	ED_{16-26}	10	10	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Duration, resident	ED_r	26	26	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Exposure Time, resident	ET_r	24	24	hours/day
Mutagenic Adjustment Factor, inhalation	MAF_I	0.244	0.244	dimensionless
Inhalation Reference Concentration	RfC	chemical-specific		µg/m^3
(Regional) Screening Level, inhalation	$(R)SL_{inh}$	derived herein		µg/L
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless
Inhalation Unit-Risk Factor	IUR	chemical-specific		(µg/m^3)$^{-1}$
Volatilization Factor	VF	0.5	0.5	L/m^3

Risk and Hazard Equations

Cancer Risk:

Carcinogens:

$$RSL_{inh} = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times EF_r \times ED_r \times ET_r \times VF}$$

Mutagens:

$$RSL_{inh} = \frac{TR \times AT_c \times 365\frac{days}{year} \times 24\frac{hour}{day}}{EF_r \times ET_r \times \left(\begin{array}{c} ED_{0-2} \times IUR \times ADAF_{0-2} + ED_{2-6} \times IUR \times ADAF_{2-6} + \\ ED_{6-16} \times IUR \times ADAF_{6-16} + ED_{16-26} \times IUR \times ADAF_{16-26} \end{array}\right) \times VF}$$

Trichloroethene:

$$RSL_{inh} = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times ET_r \times VF \times \left\{[CAF_I \times ED_r \times EF_r] + \left[MAF_I \times \left(\begin{array}{c} ED_{0-2} \times EF_r \times ADAF_{0-2} + ED_{2-6} \times EF_r \times ADAF_{2-6} \\ +ED_{6-16} \times EF_r \times ADAF_{6-16} + ED_{16-26} \times EF_r \times ADAF_{16-26} \end{array}\right)\right]\right\}}$$

Vinyl Chloride:

$$RSL_{inh} = \frac{TR}{\left(\frac{IUR \times EF_r \times ED_r \times ET_r \times \frac{1\ day}{24\ hour} \times VF}{AT_c \times 365\frac{days}{year}}\right) + (IUR \times VF)}$$

Noncancer Hazard:

$$RSL_{inh} = \frac{THQ \times AT_{nc,c} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_r \times ED_c \times ET_r \times \frac{1}{RfC} \times VF}$$

		USEPA Regional Screening Level for Inhalation Exposure to Residential Tap Water (USEPA RSL_{inh})				DTSC Screening Level for Inhalation Exposure to Residential Tap Water (DTSC-SL_{inh})			
Analyte	**Mutagen?**	**IUR** (µg/m^3)$^{-1}$	**USEPA RSL_{inh}: Cancer** (µg/L)	**RfC** (µg/m^3)	**USEPA RSL_{inh}: Noncancer** (µg/L)	**IUR** (µg/m^3)$^{-1}$	**DTSC-SL_{inh}: Cancer** (µg/L)	**RfC** (µg/m^3)	**DTSC-SL_{inh}: Noncancer** (µg/L)
USEPA RSL Analytes									
Acetophenone		--	--	--	--	--	--	4.00E+02	8.34E+02
Acrylonitrile		6.80E-05	8.26E-02	2.00E+00	4.17E+00	2.90E-04	1.94E-02	5.00E+00	1.04E+01
Aldrin		4.90E-03	1.15E-03	--	--	4.90E-03	1.15E-03	1.20E-01	2.50E-01
Benzaldehyde		--	--	--	--	--	--	4.00E+02	8.34E+02
Benzene		7.80E-06	7.20E-01	3.00E+01	6.26E+01	2.90E-05	1.94E-01	3.00E+00	6.26E+00
Benzenethiol		--	--	--	--	--	--	4.00E+00	8.34E+00
Bis(2-chloro-1-methylethyl) ether		--	--	--	--	--	--	1.60E+02	3.34E+02
Bromodichloromethane		3.70E-05	1.52E-01	--	--	3.70E-05	1.52E-01	8.00E+01	1.67E+02
Bromoform		1.10E-06	5.10E+00	--	--	1.10E-06	5.10E+00	8.00E+01	1.67E+02
Butanol, N-		--	--	--	--	--	--	4.00E+02	8.34E+02
Butylbenzene, n-		--	--	--	--	--	--	2.00E+02	4.17E+02
Butylbenzene, sec-		--	--	--	--	--	--	4.00E+02	8.34E+02
Carbon Tetrachloride		6.00E-06	9.36E-01	1.00E+02	2.09E+02	4.20E-05	1.34E-01	4.00E+01	8.34E+01
Chloral Hydrate		--	--	--	--	--	--	4.00E+02	8.34E+02
Chlordane		1.00E-04	5.62E-02	7.00E-01	1.46E+00	3.40E-04	1.65E-02	7.00E-01	1.46E+00
Chloroacetaldehyde, 2-		--	--	--	--	6.75E-05	8.32E-02	--	--

Table B-6. USEPA RSLs and DTSC-SLs for a Residential Receptor Exposed via Inhalation to Volatile Compounds during Domestic Use of Water

Definition	Variable	USEPA Value	DTSC Value	
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	dimensionless
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	dimensionless
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	dimensionless
Age-dependent Adjustment Factor, 16-26	$ADAF_{16-26}$	1	1	dimensionless
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
Carcinogenic Adjustment Factor, inhalation	CAF_I	0.756	0.756	dimensionless
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-26	ED_{16-26}	10	10	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Duration, resident	ED_r	26	26	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Exposure Time, resident	ET_r	24	24	hours/day
Mutagenic Adjustment Factor, inhalation	MAF_I	0.244	0.244	dimensionless
Inhalation Reference Concentration	RfC	chemical-specific		µg/m^3
(Regional) Screening Level, inhalation	$(R)SL_{inh}$	derived herein		µg/L
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless
Inhalation Unit-Risk Factor	IUR	chemical-specific		(µg/m^3)$^{-1}$
Volatilization Factor	VF	0.5	0.5	L/m^3

Risk and Hazard Equations

Cancer Risk:

Carcinogens:

$$RSL_{inh} = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times EF_r \times ED_r \times ET_r \times VF}$$

Mutagens:

$$RSL_{inh} = \frac{TR \times AT_c \times 365\frac{days}{year} \times 24\frac{hour}{day}}{EF_r \times ET_r \times \left(\begin{array}{c} ED_{0-2} \times IUR \times ADAF_{0-2} + ED_{2-6} \times IUR \times ADAF_{2-6} + \\ ED_{6-16} \times IUR \times ADAF_{6-16} + ED_{16-26} \times IUR \times ADAF_{16-26} \end{array}\right) \times VF}$$

Trichloroethene:

$$RSL_{inh} = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times ET_r \times VF \times \left\{[CAF_I \times ED_r \times EF_r] + \left[MAF_I \times \left(\begin{array}{c} ED_{0-2} \times EF_r \times ADAF_{0-2} + ED_{2-6} \times EF_r \times ADAF_{2-6} \\ +ED_{6-16} \times EF_r \times ADAF_{6-16} + ED_{16-26} \times EF_r \times ADAF_{16-26} \end{array}\right)\right]\right\}}$$

Vinyl Chloride:

$$RSL_{inh} = \frac{TR}{\left(\frac{IUR \times EF_r \times ED_r \times ET_r \times \frac{1\ day}{24\ hour} \times VF}{AT_c \times 365\frac{days}{year}}\right) + (IUR \times VF)}$$

Noncancer Hazard:

$$RSL_{inh} = \frac{THQ \times AT_{nc,c} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_r \times ED_c \times ET_r \times \frac{1}{RfC} \times VF}$$

		USEPA Regional Screening Level for Inhalation Exposure to Residential Tap Water (USEPA RSL_{inh})				DTSC Screening Level for Inhalation Exposure to Residential Tap Water (DTSC-SL_{inh})			
Analyte	**Mutagen?**	**IUR** (µg/m^3)$^{-1}$	**USEPA RSL_{inh}: Cancer** (µg/L)	**RfC** (µg/m^3)	**USEPA RSL_{inh}: Noncancer** (µg/L)	**IUR** (µg/m^3)$^{-1}$	**DTSC-SL_{inh}: Cancer** (µg/L)	**RfC** (µg/m^3)	**DTSC-SL_{inh}: Noncancer** (µg/L)
Chloroethanol, 2-		--	--	--	--	--	--	8.00E+01	1.67E+02
Chlorophenol, 2-		--	--	--	--	--	--	2.00E+01	4.17E+01
Crotonaldehyde, trans-		--	--	--	--	4.75E-04	1.18E-02	4.00E+00	8.34E+00
~Cyanogen		--	--	--	--	--	--	4.00E+00	8.34E+00
~Cyanogen Bromide		--	--	--	--	--	--	3.60E+02	7.51E+02
~Cyanogen Chloride		--	--	--	--	--	--	2.00E+02	4.17E+02
~Thiocyanic Acid		--	--	--	--	--	--	8.00E-01	1.67E+00
Cyclohexylamine		--	--	--	--	--	--	8.00E+02	1.67E+03
Dibromochloromethane		--	--	--	--	2.10E-05	2.67E-01	8.00E+01	1.67E+02
Dibromoethane, 1,2-		6.00E-04	9.36E-03	9.00E+00	1.88E+01	7.10E-05	7.91E-02	8.00E-01	1.67E+00
Dichloroethane, 1,1-		1.60E-06	3.51E+00	--	--	1.60E-06	3.51E+00	8.00E+02	1.67E+03
Dichloroethylene, 1,2-cis-		--	--	--	--	--	--	8.00E+00	1.67E+01
Dichloroethylene, 1,2-trans-		--	--	--	--	--	--	8.00E+01	1.67E+02
Dichloropropane, 1,3-		--	--	--	--	--	--	8.00E+01	1.67E+02
Diethylformamide		--	--	--	--	--	--	4.00E+00	8.34E+00
Diisopropyl Methylphosphonate		--	--	--	--	--	--	3.20E+02	6.67E+02
Dimethylaniline, N,N-		--	--	--	--	--	--	8.00E+00	1.67E+01

Table B-6. USEPA RSLs and DTSC-SLs for a Residential Receptor Exposed via Inhalation to Volatile Compounds during Domestic Use of Water

Definition	Variable	USEPA Value	DTSC Value	
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	dimensionless
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	dimensionless
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	dimensionless
Age-dependent Adjustment Factor, 16-26	$ADAF_{16-26}$	1	1	dimensionless
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
Carcinogenic Adjustment Factor, inhalation	CAF_I	0.756	0.756	dimensionless
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-26	ED_{16-26}	10	10	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Duration, resident	ED_r	26	26	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Exposure Time, resident	ET_r	24	24	hours/day
Mutagenic Adjustment Factor, inhalation	MAF_I	0.244	0.244	dimensionless
Inhalation Reference Concentration	RfC	chemical-specific		µg/m^3
(Regional) Screening Level, inhalation	$(R)SL_{inh}$	derived herein		µg/L
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless
Inhalation Unit-Risk Factor	IUR	chemical-specific		(µg/m^3)$^{-1}$
Volatilization Factor	VF	0.5	0.5	L/m^3

Risk and Hazard Equations

Cancer Risk:

Carcinogens:

$$RSL_{inh} = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times EF_r \times ED_r \times ET_r \times VF}$$

Mutagens:

$$RSL_{inh} = \frac{TR \times AT_c \times 365\frac{days}{year} \times 24\frac{hour}{day}}{EF_r \times ET_r \times \left(\begin{array}{c} ED_{0-2} \times IUR \times ADAF_{0-2} + ED_{2-6} \times IUR \times ADAF_{2-6} + \\ ED_{6-16} \times IUR \times ADAF_{6-16} + ED_{16-26} \times IUR \times ADAF_{16-26} \end{array}\right) \times VF}$$

Trichloroethene:

$$RSL_{inh} = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times ET_r \times VF \times \left\{[CAF_I \times ED_r \times EF_r] + \left[MAF_I \times \left(\begin{array}{c} ED_{0-2} \times EF_r \times ADAF_{0-2} + ED_{2-6} \times EF_r \times ADAF_{2-6} \\ +ED_{6-16} \times EF_r \times ADAF_{6-16} + ED_{16-26} \times EF_r \times ADAF_{16-26} \end{array}\right)\right]\right\}}$$

Vinyl Chloride:

$$RSL_{inh} = \frac{TR}{\left(\frac{IUR \times EF_r \times ED_r \times ET_r \times \frac{1\ day}{24\ hour} \times VF}{AT_c \times 365\frac{days}{year}}\right) + (IUR \times VF)}$$

Noncancer Hazard:

$$RSL_{inh} = \frac{THQ \times AT_{nc,c} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_r \times ED_c \times ET_r \times \frac{1}{RfC} \times VF}$$

		USEPA Regional Screening Level for Inhalation Exposure to Residential Tap Water (USEPA RSL_{inh})				DTSC Screening Level for Inhalation Exposure to Residential Tap Water (DTSC-SL_{inh})			
Analyte	**Mutagen?**	**IUR** (µg/m^3)$^{-1}$	**USEPA RSL_{inh}: Cancer** (µg/L)	**RfC** (µg/m^3)	**USEPA RSL_{inh}: Noncancer** (µg/L)	**IUR** (µg/m^3)$^{-1}$	**DTSC-SL_{inh}: Cancer** (µg/L)	**RfC** (µg/m^3)	**DTSC-SL_{inh}: Noncancer** (µg/L)
Dithiane, 1,4-		--	--	--	--	--	--	4.00E+01	8.34E+01
Endosulfan		--	--	--	--	--	--	2.40E+01	5.01E+01
Epichlorohydrin		1.20E-06	4.68E+00	1.00E+00	2.09E+00	2.30E-05	2.44E-01	3.00E+00	6.26E+00
Ethyl Ether		--	--	--	--	--	--	8.00E+02	1.67E+03
Ethylene Diamine		--	--	--	--	--	--	3.60E+02	7.51E+02
~Furan		--	--	--	--	--	--	4.00E+00	8.34E+00
Guanidine		--	--	--	--	--	--	4.00E+01	8.34E+01
Hexabromobenzene		--	--	--	--	--	--	8.00E+00	1.67E+01
Hexachlorobenzene		4.60E-04	1.22E-02	--	--	5.10E-04	1.10E-02	3.20E+00	6.67E+00
Hexachlorocyclohexane, Gamma- (Lindane		3.10E-04	not as a volatile	--	--	3.10E-04	1.81E-02	1.20E+00	2.50E+00
Isobutyl Alcohol		--	--	--	--	--	--	1.20E+03	2.50E+03
Lewisite		--	--	--	--	--	--	2.00E-02	4.17E-02
~Mercury (elemental)		--	--	3.00E-01	6.26E-01	--	--	3.00E-02	6.26E-02
Merphos		--	--	--	--	--	--	1.20E-01	2.50E-01
Methyl Acetate		--	--	--	--	--	--	4.00E+03	8.34E+03
Methylene Chloride	M	1.00E-08	2.03E+02	6.00E+02	1.25E+03	1.00E-06	2.03E+00	4.00E+02	8.34E+02
Mineral oils		--	--	--	--	--	--	1.20E+04	2.50E+04

Table B-6. USEPA RSLs and DTSC-SLs for a Residential Receptor Exposed via Inhalation to Volatile Compounds during Domestic Use of Water

Definition	Variable	USEPA Value	DTSC Value	
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Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	dimensionless
Age-dependent Adjustment Factor, 16-26	$ADAF_{16-26}$	1	1	dimensionless
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
Carcinogenic Adjustment Factor, inhalation	CAF_I	0.756	0.756	dimensionless
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-26	ED_{16-26}	10	10	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Duration, resident	ED_r	26	26	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Exposure Time, resident	ET_r	24	24	hours/day
Mutagenic Adjustment Factor, inhalation	MAF_I	0.244	0.244	dimensionless
Inhalation Reference Concentration	RfC	chemical-specific		µg/m^3
(Regional) Screening Level, inhalation	$(R)SL_{inh}$	derived herein		µg/L
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless
Inhalation Unit-Risk Factor	IUR	chemical-specific		(µg/m^3)$^{-1}$
Volatilization Factor	VF	0.5	0.5	L/m^3

Risk and Hazard Equations

Cancer Risk:

Carcinogens:

$$RSL_{inh} = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times EF_r \times ED_r \times ET_r \times VF}$$

Mutagens:

$$RSL_{inh} = \frac{TR \times AT_c \times 365\frac{days}{year} \times 24\frac{hour}{day}}{EF_r \times ET_r \times \left(\begin{array}{c} ED_{0-2} \times IUR \times ADAF_{0-2} + ED_{2-6} \times IUR \times ADAF_{2-6} + \\ ED_{6-16} \times IUR \times ADAF_{6-16} + ED_{16-26} \times IUR \times ADAF_{16-26} \end{array}\right) \times VF}$$

Trichloroethene:

$$RSL_{inh} = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times ET_r \times VF \times \left\{[CAF_I \times ED_r \times EF_r] + \left[MAF_I \times \left(\begin{array}{c} ED_{0-2} \times EF_r \times ADAF_{0-2} + ED_{2-6} \times EF_r \times ADAF_{2-6} \\ +ED_{6-16} \times EF_r \times ADAF_{6-16} + ED_{16-26} \times EF_r \times ADAF_{16-26} \end{array}\right)\right]\right\}}$$

Vinyl Chloride:

$$RSL_{inh} = \frac{TR}{\left(\frac{IUR \times EF_r \times ED_r \times ET_r \times \frac{1\ day}{24\ hour} \times VF}{AT_c \times 365\frac{days}{year}}\right) + (IUR \times VF)}$$

Noncancer Hazard:

$$RSL_{inh} = \frac{THQ \times AT_{nc,c} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_r \times ED_c \times ET_r \times \frac{1}{RfC} \times VF}$$

		USEPA Regional Screening Level for Inhalation Exposure to Residential Tap Water (USEPA RSL_{inh})				DTSC Screening Level for Inhalation Exposure to Residential Tap Water (DTSC-SL_{inh})			
Analyte	**Mutagen?**	**IUR** (µg/m^3)$^{-1}$	**USEPA RSL_{inh}: Cancer** (µg/L)	**RfC** (µg/m^3)	**USEPA RSL_{inh}: Noncancer** (µg/L)	**IUR** (µg/m^3)$^{-1}$	**DTSC-SL_{inh}: Cancer** (µg/L)	**RfC** (µg/m^3)	**DTSC-SL_{inh}: Noncancer** (µg/L)
Mirex		5.10E-03	1.10E-03	--	--	5.10E-03	1.10E-03	8.00E-01	1.67E+00
Naled		--	--	--	--	--	--	8.00E+00	1.67E+01
Nitrotoluene, o-		--	--	--	--	5.50E-05	1.02E-01	3.60E+00	7.51E+00
Pentabromodiphenyl Ether		--	--	--	--	--	--	8.00E+00	1.67E+01
Pentachloroethane		--	--	--	--	2.25E-05	2.50E-01	--	--
Perfluorobutane Sulfonate		--	--	--	--	--	--	8.00E+01	1.67E+02
Phosphorus, White		--	--	--	--	--	--	8.00E-02	1.67E-01
~Dimethylterephthalate		--	--	--	--	--	--	4.00E+02	8.34E+02
~Aroclor 1016		2.00E-05	2.81E-01	--	--	2.00E-05	2.81E-01	2.80E-01	5.84E-01
~Aroclor 1254		5.71E-04	9.83E-03	--	--	5.70E-04	9.85E-03	8.00E-02	1.67E-01
~Aroclor 5460		--	--	--	--	--	--	2.40E+00	5.01E+00
Propargyl Alcohol		--	--	--	--	--	--	8.00E+00	1.67E+01
Pyridine		--	--	--	--	--	--	4.00E+00	8.34E+00
Tetrachloroethane, 1,1,2,2-		5.80E-05	9.68E-02	--	--	5.80E-05	9.68E-02	8.00E+01	1.67E+02
Tetrachloroethylene		2.60E-07	2.16E+01	4.00E+01	8.34E+01	5.90E-06	9.52E-01	3.50E+01	7.30E+01
Trichloroethane, 1,1,1-		--	--	5.00E+03	1.04E+04	--	--	1.00E+03	2.09E+03
Trichlorofluoromethane		--	--	--	--	--	--	1.20E+03	2.50E+03

Table B-6. USEPA RSLs and DTSC-SLs for a Residential Receptor Exposed via Inhalation to Volatile Compounds during Domestic Use of Water

Definition	Variable	USEPA Value	DTSC Value	
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	dimensionless
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	dimensionless
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	dimensionless
Age-dependent Adjustment Factor, 16-26	$ADAF_{16-26}$	1	1	dimensionless
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
Carcinogenic Adjustment Factor, inhalation	CAF_I	0.756	0.756	dimensionless
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-26	ED_{16-26}	10	10	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Duration, resident	ED_r	26	26	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Exposure Time, resident	ET_r	24	24	hours/day
Mutagenic Adjustment Factor, inhalation	MAF_I	0.244	0.244	dimensionless
Inhalation Reference Concentration	RfC	chemical-specific		µg/m^3
(Regional) Screening Level, inhalation	$(R)SL_{inh}$	derived herein		µg/L
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless
Inhalation Unit-Risk Factor	IUR	chemical-specific		(µg/m^3)$^{-1}$
Volatilization Factor	VF	0.5	0.5	L/m^3

Risk and Hazard Equations

Cancer Risk:

Carcinogens:

$$RSL_{inh} = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times EF_r \times ED_r \times ET_r \times VF}$$

Mutagens:

$$RSL_{inh} = \frac{TR \times AT_c \times 365\frac{days}{year} \times 24\frac{hour}{day}}{EF_r \times ET_r \times \left(\begin{array}{c} ED_{0-2} \times IUR \times ADAF_{0-2} + ED_{2-6} \times IUR \times ADAF_{2-6} + \\ ED_{6-16} \times IUR \times ADAF_{6-16} + ED_{16-26} \times IUR \times ADAF_{16-26} \end{array}\right) \times VF}$$

Trichloroethene:

$$RSL_{inh} = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times ET_r \times VF \times \left\{[CAF_I \times ED_r \times EF_r] + \left[MAF_I \times \left(\begin{array}{c} ED_{0-2} \times EF_r \times ADAF_{0-2} + ED_{2-6} \times EF_r \times ADAF_{2-6} \\ +ED_{6-16} \times EF_r \times ADAF_{6-16} + ED_{16-26} \times EF_r \times ADAF_{16-26} \end{array}\right)\right]\right\}}$$

Vinyl Chloride:

$$RSL_{inh} = \frac{TR}{\left(\frac{IUR \times EF_r \times ED_r \times ET_r \times \frac{1\ day}{24\ hour} \times VF}{AT_c \times 365\frac{days}{year}}\right) + (IUR \times VF)}$$

Noncancer Hazard:

$$RSL_{inh} = \frac{THQ \times AT_{nc,c} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_r \times ED_c \times ET_r \times \frac{1}{RfC} \times VF}$$

		USEPA Regional Screening Level for Inhalation Exposure to Residential Tap Water (USEPA RSL_{inh})				DTSC Screening Level for Inhalation Exposure to Residential Tap Water (DTSC-SL_{inh})			
Analyte	**Mutagen?**	**IUR** (µg/m^3)$^{-1}$	**USEPA RSL_{inh}: Cancer** (µg/L)	**RfC** (µg/m^3)	**USEPA RSL_{inh}: Noncancer** (µg/L)	**IUR** (µg/m^3)$^{-1}$	**DTSC-SL_{inh}: Cancer** (µg/L)	**RfC** (µg/m^3)	**DTSC-SL_{inh}: Noncancer** (µg/L)
Trichloropropane, 1,1,2-		--	--	--	--	--	--	2.00E+01	4.17E+01
Trichloropropane, 1,2,3-	M	--	--	3.00E-01	6.26E-01	7.50E-03	2.70E-04	3.00E-01	6.26E-01
Additional Analytes									
Dichlorobenzene, 1,3-		--	--	--	--	--	--	1.20E+02	2.50E+02
Methylcyclohexane		--	--	--	--	--	--	6.00E+03	1.25E+04

"--" = no value

Table C-1. Air Screening Levels for Analytes with at least one DTSC-SL

		Toxicity Factor for Final Screening Value				Screening Levels for Residential Air (µg/m³)								Screening Levels for Commercial/Industrial Air (µg/m³)							
						Cancer Endpoint				Noncancer Endpoint				Cancer Endpoint				Noncancer Endpoint			
Analyte	CAS #	Inhalation Unit Risk, IUR (µg/m³)⁻¹	Source	Reference Concentration, RfC or REL (µg/m³)	Source	USEPA RSL	DTSC-SL	Final Value	Source	USEPA RSL	DTSC-SL	Final Value	Source	USEPA RSL	DTSC-SL	Final Value	Source	USEPA RSL	DTSC-SL	Final Value	Source
USEPA RSL Analytes																					
Acetaldehyde	75-07-0	2.7E-06	OEHHA	9.0E+00	IRIS	1.28E+00	1.04E+00	1.0E+00	DTSC	9.39E+00	9.39E+00	9.4E+00	USEPA	5.57E+00	4.54E+00	4.5E+00	DTSC	3.94E+01	3.94E+01	3.9E+01	USEPA
Acetophenone	98-86-2	--	--	4.0E+02	Route	--	--	--	--	--	4.17E+02	4.2E+02	DTSC	--	--	--	--	--	1.75E+03	1.8E+03	DTSC
Acrylamide	79-06-1	1.3E-03	OEHHA	6.0E+00	IRIS	1.01E-02	7.80E-04	7.8E-04	DTSC	6.26E+00	6.26E+00	6.3E+00	USEPA	1.23E-01	9.43E-03	9.4E-03	DTSC	2.63E+01	2.63E+01	2.6E+01	USEPA
Acrylonitrile	107-13-1	2.9E-04	OEHHA	2.0E+00	IRIS	4.13E-02	9.68E-03	9.7E-03	DTSC	2.09E+00	2.09E+00	2.1E+00	USEPA	1.80E-01	4.23E-02	4.2E-02	DTSC	8.76E+00	8.76E+00	8.8E+00	USEPA
Aldrin	309-00-2	4.9E-03	IRIS	1.2E-01	Route	5.73E-04	5.73E-04	5.7E-04	USEPA	--	1.25E-01	1.3E-01	DTSC	2.50E-03	2.50E-03	2.5E-03	USEPA	--	5.26E-01	5.3E-01	DTSC
Arsine	7784-42-1	--	--	1.5E-02	OEHHA	--	--	--	--	5.21E-02	1.56E-02	1.6E-02	DTSC	--	--	--	--	2.19E-01	6.57E-02	6.6E-02	DTSC
Benfluralin	1861-40-1	--	--	1.2E+03	Route	--	--	--	--	--	1.25E+03	1.3E+03	DTSC	--	--	--	--	--	5.26E+03	5.3E+03	DTSC
Benzaldehyde	100-52-7	--	--	4.0E+02	Route	--	--	--	--	--	4.17E+02	4.2E+02	DTSC	--	--	--	--	--	1.75E+03	1.8E+03	DTSC
Benzene	71-43-2	2.9E-05	OEHHA	3.0E+00	OEHHA	3.60E-01	9.68E-02	9.7E-02	DTSC	3.13E+01	3.13E+00	3.1E+00	DTSC	1.57E+00	4.23E-01	4.2E-01	DTSC	1.31E+02	1.31E+01	1.3E+01	DTSC
Benzenethiol	108-98-5	--	--	4.0E+00	Route	--	--	--	--	--	4.17E+00	4.2E+00	DTSC	--	--	--	--	--	1.75E+01	1.8E+01	DTSC
Benzidine	92-87-5	1.4E-01	OEHHA	--	--	1.51E-05	7.24E-06	7.2E-06	DTSC	--	--	--	--	1.83E-04	8.76E-05	8.8E-05	DTSC	--	--	--	--
Benzotrichloride	98-07-7	3.3E-03	Route	--	--	--	8.64E-04	8.6E-04	DTSC	--	--	--	--	--	3.77E-03	3.8E-03	DTSC	--	--	--	--
Beryllium and compounds	7440-41-7	2.4E-03	IRIS	7.0E-03	OEHHA	1.17E-03	1.17E-03	1.2E-03	USEPA	2.09E-02	7.30E-03	7.3E-03	DTSC	5.11E-03	5.11E-03	5.1E-03	USEPA	8.76E-02	3.07E-02	3.1E-02	DTSC
Biphenyl, 1,1'-	92-52-4	2.0E-06	Route	4.0E-01	Screening PPRTV	--	1.40E+00	1.4E+00	DTSC	4.17E-01	4.17E-01	4.2E-01	USEPA	--	6.13E+00	6.1E+00	DTSC	1.75E+00	1.75E+00	1.8E+00	USEPA
Bis(2-chloro-1-methylethyl) ether	108-60-1	--	--	1.6E+02	Route	--	--	--	--	--	1.67E+02	1.7E+02	DTSC	--	--	--	--	--	7.01E+02	7.0E+02	DTSC
Bis(2-chloroethyl)ether	111-44-4	7.1E-04	OEHHA	--	--	8.51E-03	3.95E-03	4.0E-03	DTSC	--	--	--	--	3.72E-02	1.73E-02	1.7E-02	DTSC	--	--	--	--
Boron Trifluoride	7637-07-2	--	--	7.0E-01	HEAST	--	--	--	--	1.36E+01	7.30E-01	7.3E-01	DTSC	--	--	--	--	5.69E+01	3.07E+00	3.1E+00	DTSC
Bromodichloromethane	75-27-4	3.7E-05	OEHHA	8.0E+01	Route	7.59E-02	7.59E-02	7.6E-02	USEPA	--	8.34E+01	8.3E+01	DTSC	3.31E-01	3.31E-01	3.3E-01	USEPA	--	3.50E+02	3.5E+02	DTSC
Bromoform	75-25-2	1.1E-06	IRIS	8.0E+01	Route	2.55E+00	2.55E+00	2.6E+00	USEPA	--	8.34E+01	8.3E+01	DTSC	1.11E+01	1.11E+01	1.1E+01	USEPA	--	3.50E+02	3.5E+02	DTSC
Bromophos	2104-96-3	--	--	2.0E+01	Route	--	--	--	--	--	2.09E+01	2.1E+01	DTSC	--	--	--	--	--	8.76E+01	8.8E+01	DTSC
Bromoxynil Octanoate	1689-99-2	--	--	8.0E+01	Route	--	--	--	--	--	8.34E+01	8.3E+01	DTSC	--	--	--	--	--	3.50E+02	3.5E+02	DTSC
Butadiene, 1,3-	106-99-0	1.7E-04	OEHHA	2.0E+00	IRIS	9.36E-02	1.65E-02	1.7E-02	DTSC	2.09E+00	2.09E+00	2.1E+00	USEPA	4.09E-01	7.21E-02	7.2E-02	DTSC	8.76E+00	8.76E+00	8.8E+00	USEPA
Butanol, N-	71-36-3	--	--	4.0E+02	Route	--	--	--	--	--	4.17E+02	4.2E+02	DTSC	--	--	--	--	--	1.75E+03	1.8E+03	DTSC
Butylate	2008-41-5	--	--	2.0E+02	Route	--	--	--	--	--	2.09E+02	2.1E+02	DTSC	--	--	--	--	--	8.76E+02	8.8E+02	DTSC
Butylbenzene, n-	104-51-8	--	--	2.0E+02	Route	--	--	--	--	--	2.09E+02	2.1E+02	DTSC	--	--	--	--	--	8.76E+02	8.8E+02	DTSC
Butylbenzene, sec-	135-98-8	--	--	4.0E+02	Route	--	--	--	--	--	4.17E+02	4.2E+02	DTSC	--	--	--	--	--	1.75E+03	1.8E+03	DTSC
Butylbenzene, tert-	98-06-6	--	--	4.0E+02	Route	--	--	--	--	--	4.17E+02	4.2E+02	DTSC	--	--	--	--	--	1.75E+03	1.8E+03	DTSC
Cadmium (Water)	7440-43-9 (water)	4.2E-03	OEHHA	1.0E-02	ATSDR	1.56E-03	6.68E-04	6.7E-04	DTSC	1.04E-02	1.04E-02	1.0E-02	USEPA	6.81E-03	2.92E-03	2.9E-03	DTSC	4.38E-02	4.38E-02	4.4E-02	USEPA
Carbon Tetrachloride	56-23-5	4.2E-05	OEHHA	4.0E+01	OEHHA	4.68E-01	6.68E-02	6.7E-02	DTSC	1.04E+02	4.17E+01	4.2E+01	DTSC	2.04E+00	2.92E-01	2.9E-01	DTSC	4.38E+02	1.75E+02	1.8E+02	DTSC
Chloral Hydrate	302-17-0	--	--	4.0E+02	Route	--	--	--	--	--	4.17E+02	4.2E+02	DTSC	--	--	--	--	--	1.75E+03	1.8E+03	DTSC
Chlordane	12789-03-6	3.4E-04	OEHHA	7.0E-01	IRIS	2.81E-02	8.26E-03	8.3E-03	DTSC	7.30E-01	7.30E-01	7.3E-01	USEPA	1.23E-01	3.61E-02	3.6E-02	DTSC	3.07E+00	3.07E+00	3.1E+00	USEPA
Chloroacetaldehyde, 2-	107-20-0	6.8E-05	Route	--	--	--	4.16E-02	4.2E-02	DTSC	--	--	--	--	--	1.82E-01	1.8E-01	DTSC	--	--	--	--
Chlorobenzilate	510-15-6	7.8E-05	HEAST	--	--	9.06E-02	3.60E-02	3.6E-02	DTSC	--	--	--	--	3.96E-01	1.57E-01	1.6E-01	DTSC	--	--	--	--
Chlorobutane, 1-	109-69-3	--	--	1.6E+02	Route	--	--	--	--	--	1.67E+02	1.7E+02	DTSC	--	--	--	--	--	7.01E+02	7.0E+02	DTSC
Chloroethanol, 2-	107-07-3	--	--	8.0E+01	Route	--	--	--	--	--	8.34E+01	8.3E+01	DTSC	--	--	--	--	--	3.50E+02	3.5E+02	DTSC
Chlorophenol, 2-	95-57-8	--	--	2.0E+01	Route	--	--	--	--	--	2.09E+01	2.1E+01	DTSC	--	--	--	--	--	8.76E+01	8.8E+01	DTSC
Chlorotoluene, o-	95-49-8	--	--	8.0E+01	Route	--	--	--	--	--	8.34E+01	8.3E+01	DTSC	--	--	--	--	--	3.50E+02	3.5E+02	DTSC
Chlorotoluene, p-	106-43-4	--	--	8.0E+01	Route	--	--	--	--	--	8.34E+01	8.3E+01	DTSC	--	--	--	--	--	3.50E+02	3.5E+02	DTSC
Crotonaldehyde, trans-	123-73-9	4.8E-04	Route	4.0E+00	Route	--	5.91E-03	5.9E-03	DTSC	--	4.17E+00	4.2E+00	DTSC	--	2.58E-02	2.6E-02	DTSC	--	1.75E+01	1.8E+01	DTSC
Cyanides																					
~Cyanogen	460-19-5	--	--	4.0E+00	Route	--	--	--	--	--	4.17E+00	4.2E+00	DTSC	--	--	--	--	--	1.75E+01	1.8E+01	DTSC
~Cyanogen Bromide	506-68-3	--	--	3.6E+02	Route	--	--	--	--	--	3.75E+02	3.8E+02	DTSC	--	--	--	--	--	1.58E+03	1.6E+03	DTSC
~Cyanogen Chloride	506-77-4	--	--	2.0E+02	Route	--	--	--	--	--	2.09E+02	2.1E+02	DTSC	--	--	--	--	--	8.76E+02	8.8E+02	DTSC
~Thiocyanic Acid	463-56-9	--	--	8.0E-01	Route	--	--	--	--	--	8.34E-01	8.3E-01	DTSC	--	--	--	--	--	3.50E+00	3.5E+00	DTSC
Cyclohexylamine	108-91-8	--	--	8.0E+02	Route	--	--	--	--	--	8.34E+02	8.3E+02	DTSC	--	--	--	--	--	3.50E+03	3.5E+03	DTSC
Dibenzothiophene	132-65-0	--	--	4.0E+01	Route	--	--	--	--	--	4.17E+01	4.2E+01	DTSC	--	--	--	--	--	1.75E+02	1.8E+02	DTSC
Dibromobenzene, 1,3-	108-36-1	--	--	1.6E+00	Route	--	--	--	--	--	1.67E+00	1.7E+00	DTSC	--	--	--	--	--	7.01E+00	7.0E+00	DTSC
Dibromobenzene, 1,4-	106-37-6	--	--	4.0E+01	Route	--	--	--	--	--	4.17E+01	4.2E+01	DTSC	--	--	--	--	--	1.75E+02	1.8E+02	DTSC
Dibromochloromethane	124-48-1	2.1E-05	Route	8.0E+01	Route	--	1.34E-01	1.3E-01	DTSC	--	8.34E+01	8.3E+01	DTSC	--	5.84E-01	5.8E-01	DTSC	--	3.50E+02	3.5E+02	DTSC
Dibromoethane, 1,2-	106-93-4	6.0E-04	IRIS	8.0E-01	OEHHA	4.68E-03	4.68E-03	4.7E-03	USEPA	9.39E+00	8.34E-01	8.3E-01	DTSC	2.04E-02	2.04E-02	2.0E-02	USEPA	3.94E+01	3.50E+00	3.5E+00	DTSC
Dichloroethane, 1,1-	75-34-3	1.6E-06	OEHHA	8.0E+02	Route	1.75E+00	1.75E+00	1.8E+00	USEPA	--	8.34E+02	8.3E+02	DTSC	7.67E+00	7.67E+00	7.7E+00	USEPA	--	3.50E+03	3.5E+03	DTSC
Dichloroethylene, 1,1-	75-35-4	--	--	7.0E+01	OEHHA	--	--	--	--	2.09E+02	7.30E+01	7.3E+01	DTSC	--	--	--	--	8.76E+02	3.07E+02	3.1E+02	DTSC
Dichloroethylene, 1,2-cis-	156-59-2	--	--	8.0E+00	Route	--	--	--	--	--	8.34E+00	8.3E+00	DTSC	--	--	--	--	--	3.50E+01	3.5E+01	DTSC
Dichloroethylene, 1,2-trans-	156-60-5	--	--	8.0E+01	Route	--	--	--	--	--	8.34E+01	8.3E+01	DTSC	--	--	--	--	--	3.50E+02	3.5E+02	DTSC
Dichloropropane, 1,3-	142-28-9	--	--	8.0E+01	Route	--	--	--	--	--	8.34E+01	8.3E+01	DTSC	--	--	--	--	--	3.50E+02	3.5E+02	DTSC
Dichloropropene, 1,3-	542-75-6	1.6E-05	OEHHA	2.0E+01	IRIS	7.02E-01	1.75E-01	1.8E-01	DTSC	2.09E+01	2.09E+01	2.1E+01	USEPA	3.07E+00	7.67E-01	7.7E-01	DTSC	8.76E+01	8.76E+01	8.8E+01	USEPA
Dieldrin	60-57-1	4.6E-03	IRIS	2.0E-01	Route	6.10E-04	6.10E-04	6.1E-04	USEPA	--	2.09E-01	2.1E-01	DTSC	2.67E-03	2.67E-03	2.7E-03	USEPA	--	8.76E-01	8.8E-01	DTSC
Diethylformamide	617-84-5	--	--	4.0E+00	Route	--	--	--	--	--	4.17E+00	4.2E+00	DTSC	--	--	--	--	--	1.75E+01	1.8E+01	DTSC
Diisopropyl Methylphosphonate	1445-75-6	--	--	3.2E+02	Route	--	--	--	--	--	3.34E+02	3.3E+02	DTSC	--	--	--	--	--	1.40E+03	1.4E+03	DTSC
Dimethylaniline, N,N-	121-69-7	--	--	8.0E+00	Route	--	--	--	--	--	8.34E+00	8.3E+00	DTSC	--	--	--	--	--	3.50E+01	3.5E+01	DTSC
Dioxane, 1,4-	123-91-1	7.7E-06	OEHHA	3.0E+01	IRIS	5.62E-01	3.65E-01	3.6E-01	DTSC	3.13E+01	3.13E+01	3.1E+01	USEPA	2.45E+00	1.59E+00	1.6E+00	DTSC	1.31E+02	1.31E+02	1.3E+02	USEPA
Dioxins																					
~Hexachlorodibenzo-p-dioxin, Mixture	Hexachlorodibenzo-p-dioxin Mixture	3.8E+00	OEHHA	--	--	2.16E-06	7.39E-07	7.4E-07	DTSC	--	--	--	--	9.43E-06	3.23E-06	3.2E-06	DTSC	--	--	--	--

Table C-1. Air Screening Levels for Analytes with at least one DTSC-SL

		Toxicity Factor for Final Screening Value				Screening Levels for Residential Air (µg/m^3)								Screening Levels for Commercial/Industrial Air (µg/m^3)							
		Inhalation Unit Risk, IUR		Reference Concentration, RfC or REL		Cancer Endpoint				Noncancer Endpoint				Cancer Endpoint				Noncancer Endpoint			
Analyte	**CAS #**	(µg/m^3)$^{-1}$	Source	(µg/m^3)	Source	**USEPA RSL**	**DTSC-SL**	**Final Value**	**Source**	**USEPA RSL**	**DTSC-SL**	**Final Value**	**Source**	**USEPA RSL**	**DTSC-SL**	**Final Value**	**Source**	**USEPA RSL**	**DTSC-SL**	**Final Value**	**Source**
Diphenylhydrazine, 1,2-	122-66-7	2.5E-04	OEHHA	--	--	1.28E-02	1.12E-02	1.1E-02	DTSC	--	--	--	--	5.57E-02	4.91E-02	4.9E-02	DTSC	--	--	--	--
Dithiane, 1,4-	505-29-3	--	--	4.0E+01	Route	--	--	--	--	--	4.17E+01	4.2E+01	DTSC	--	--	--	--	--	1.75E+02	1.8E+02	DTSC
EPTC	759-94-4	--	--	1.0E+02	Route	--	--	--	--	--	1.04E+02	1.0E+02	DTSC	--	--	--	--	--	4.38E+02	4.4E+02	DTSC
Endosulfan	115-29-7	--	--	2.4E+01	Route	--	--	--	--	--	2.50E+01	2.5E+01	DTSC	--	--	--	--	--	1.05E+02	1.1E+02	DTSC
Epichlorohydrin	106-89-8	2.3E-05	OEHHA	1.0E+00	IRIS	2.34E+00	1.22E-01	1.2E-01	DTSC	1.04E+00	1.04E+00	1.0E+00	USEPA	1.02E+01	5.33E-01	5.3E-01	DTSC	4.38E+00	4.38E+00	4.4E+00	USEPA
Ethoxyethanol, 2-	110-80-5	--	--	7.0E+01	OEHHA	--	--	--	--	2.09E+02	7.30E+01	7.3E+01	DTSC	--	--	--	--	8.76E+02	3.07E+02	3.1E+02	DTSC
Ethyl Chloride (Chloroethane)	75-00-3	1.2E-06	Route	1.0E+04	IRIS	--	2.39E+00	2.4E+00	DTSC	1.04E+04	1.04E+04	1.0E+04	USEPA	--	1.04E+01	1.0E+01	DTSC	4.38E+04	4.38E+04	4.4E+04	USEPA
Ethyl Ether	60-29-7	--	--	8.0E+02	Route	--	--	--	--	--	8.34E+02	8.3E+02	DTSC	--	--	--	--	--	3.50E+03	3.5E+03	DTSC
Ethylene Diamine	107-15-3	--	--	3.6E+02	Route	--	--	--	--	--	3.75E+02	3.8E+02	DTSC	--	--	--	--	--	1.58E+03	1.6E+03	DTSC
Formaldehyde	50-00-0	1.3E-05	IRIS	9.0E+00	OEHHA	2.16E-01	2.16E-01	2.2E-01	USEPA	1.02E+01	9.39E+00	9.4E+00	DTSC	9.43E-01	9.43E-01	9.4E-01	USEPA	4.29E+01	3.94E+01	3.9E+01	DTSC
Furans																					
~Dibenzofuran	132-64-9	--	--	4.0E+00	Route	--	--	--	--	--	4.17E+00	4.2E+00	DTSC	--	--	--	--	--	1.75E+01	1.8E+01	DTSC
~Furan	110-00-9	--	--	4.0E+00	Route	--	--	--	--	--	4.17E+00	4.2E+00	DTSC	--	--	--	--	--	1.75E+01	1.8E+01	DTSC
Guanidine	113-00-8	--	--	4.0E+01	Route	--	--	--	--	--	4.17E+01	4.2E+01	DTSC	--	--	--	--	--	1.75E+02	1.8E+02	DTSC
Heptachlor	76-44-8	1.3E-03	IRIS	2.0E+00	Route	2.16E-03	2.16E-03	2.2E-03	USEPA	--	2.09E+00	2.1E+00	DTSC	9.43E-03	9.43E-03	9.4E-03	USEPA	--	8.76E+00	8.8E+00	DTSC
Heptachlor Epoxide	1024-57-3	2.6E-03	IRIS	5.2E-02	Route	1.08E-03	1.08E-03	1.1E-03	USEPA	--	5.42E-02	5.4E-02	DTSC	4.72E-03	4.72E-03	4.7E-03	USEPA	--	2.28E-01	2.3E-01	DTSC
Hexabromobenzene	87-82-1	--	--	8.0E+00	Route	--	--	--	--	--	8.34E+00	8.3E+00	DTSC	--	--	--	--	--	3.50E+01	3.5E+01	DTSC
Hexachlorobenzene	118-74-1	5.1E-04	OEHHA	3.2E+00	Route	6.10E-03	5.51E-03	5.5E-03	DTSC	--	3.34E+00	3.3E+00	DTSC	2.67E-02	2.40E-02	2.4E-02	DTSC	--	1.40E+01	1.4E+01	DTSC
Hexachlorobutadiene	87-68-3	2.2E-05	IRIS	4.0E+00	Route	1.28E-01	1.28E-01	1.3E-01	USEPA	--	4.17E+00	4.2E+00	DTSC	5.57E-01	5.57E-01	5.6E-01	USEPA	--	1.75E+01	1.8E+01	DTSC
Hexachlorocyclohexane, Alpha-	319-84-6	1.8E-03	IRIS	3.2E+01	Route	1.56E-03	1.56E-03	1.6E-03	USEPA	--	3.34E+01	3.3E+01	DTSC	6.81E-03	6.81E-03	6.8E-03	USEPA	--	1.40E+02	1.4E+02	DTSC
Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	3.1E-04	OEHHA	1.2E+00	Route	9.06E-03	9.06E-03	9.1E-03	USEPA	--	1.25E+00	1.3E+00	DTSC	3.96E-02	3.96E-02	4.0E-02	USEPA	--	5.26E+00	5.3E+00	DTSC
Hexachlorocyclohexane, Technical	608-73-1	1.1E-03	OEHHA	--	--	5.51E-03	2.55E-03	2.6E-03	DTSC	--	--	--	--	2.40E-02	1.11E-02	1.1E-02	DTSC	--	--	--	--
Hydrogen Chloride	7647-01-0	--	--	9.0E+00	OEHHA	--	--	--	--	2.09E+01	9.39E+00	9.4E+00	DTSC	--	--	--	--	8.76E+01	3.94E+01	3.9E+01	DTSC
Isobutyl Alcohol	78-83-1	--	--	1.2E+03	Route	--	--	--	--	--	1.25E+03	1.3E+03	DTSC	--	--	--	--	--	5.26E+03	5.3E+03	DTSC
Isopropalin	33820-53-0	--	--	6.0E+01	Route	--	--	--	--	--	6.26E+01	6.3E+01	DTSC	--	--	--	--	--	2.63E+02	2.6E+02	DTSC
Lead Compounds																					
~Tetraethyl Lead	78-00-2	--	--	4.0E-04	Route	--	--	--	--	--	4.17E-04	4.2E-04	DTSC	--	--	--	--	--	1.75E-03	1.8E-03	DTSC
Lewisite	541-25-3	--	--	2.0E-02	Route	--	--	--	--	--	2.09E-02	2.1E-02	DTSC	--	--	--	--	--	8.76E-02	8.8E-02	DTSC
Mercury Compounds																					
~Mercuric Chloride (and other Mercury salts)	7487-94-7	--	--	3.0E-02	OEHHA	--	--	--	--	3.13E-01	3.13E-02	3.1E-02	DTSC	--	--	--	--	1.31E+00	1.31E-01	1.3E-01	DTSC
~Mercury (elemental)	7439-97-6	--	--	3.0E-02	OEHHA	--	--	--	--	3.13E-01	3.13E-02	3.1E-02	DTSC	--	--	--	--	1.31E+00	1.31E-01	1.3E-01	DTSC
Merphos	150-50-5	--	--	1.2E-01	Route	--	--	--	--	--	1.25E-01	1.3E-01	DTSC	--	--	--	--	--	5.26E-01	5.3E-01	DTSC
Methanol	67-56-1	--	--	4.0E+03	OEHHA	--	--	--	--	2.09E+04	4.17E+03	4.2E+03	DTSC	--	--	--	--	8.76E+04	1.75E+04	1.8E+04	DTSC
Methoxychlor	72-43-5	--	--	2.0E+01	Route	--	--	--	--	--	2.09E+01	2.1E+01	DTSC	--	--	--	--	--	8.76E+01	8.8E+01	DTSC
Methyl Acetate	79-20-9	--	--	4.0E+03	Route	--	--	--	--	--	4.17E+03	4.2E+03	DTSC	--	--	--	--	--	1.75E+04	1.8E+04	DTSC
Methylene Chloride	75-09-2	1.0E-06	OEHHA	4.0E+02	OEHHA	1.01E+02	1.01E+00	1.0E+00	DTSC	6.26E+02	4.17E+02	4.2E+02	DTSC	1.23E+03	1.23E+01	1.2E+01	DTSC	2.63E+03	1.75E+03	1.8E+03	DTSC
Methylstyrene, Alpha-	98-83-9	--	--	2.8E+02	Route	--	--	--	--	--	2.92E+02	2.9E+02	DTSC	--	--	--	--	--	1.23E+03	1.2E+03	DTSC
Mineral oils	8012-95-1	--	--	1.2E+04	Route	--	--	--	--	--	1.25E+04	1.3E+04	DTSC	--	--	--	--	--	5.26E+04	5.3E+04	DTSC
Mirex	2385-85-5	5.1E-03	OEHHA	8.0E-01	Route	5.51E-04	5.51E-04	5.5E-04	USEPA	--	8.34E-01	8.3E-01	DTSC	2.40E-03	2.40E-03	2.4E-03	USEPA	--	3.50E+00	3.5E+00	DTSC
Naled	300-76-5	--	--	8.0E+00	Route	--	--	--	--	--	8.34E+00	8.3E+00	DTSC	--	--	--	--	--	3.50E+01	3.5E+01	DTSC
Naphthylamine, 2-	91-59-8	5.1E-04	OEHHA	--	--	--	5.51E-03	5.5E-03	DTSC	--	--	--	--	--	2.40E-02	2.4E-02	DTSC	--	--	--	--
Nickel Refinery Dust	Nickel refinery dust	2.6E-04	OEHHA	1.4E-02	OEHHA	1.17E-02	1.08E-02	1.1E-02	DTSC	1.46E-02	1.46E-02	1.5E-02	USEPA	5.11E-02	4.72E-02	4.7E-02	DTSC	6.13E-02	6.13E-02	6.1E-02	USEPA
Nickel Soluble Salts	7440-02-0	2.6E-04	OEHHA	1.4E-02	OEHHA	1.08E-02	1.08E-02	1.1E-02	USEPA	9.39E-02	1.46E-02	1.5E-02	DTSC	4.72E-02	4.72E-02	4.7E-02	USEPA	3.94E-01	6.13E-02	6.1E-02	DTSC
Nickel Subsulfide	12035-72-2	4.9E-04	OEHHA	1.4E-02	OEHHA	5.85E-03	5.73E-03	5.7E-03	DTSC	1.46E-02	1.46E-02	1.5E-02	USEPA	2.56E-02	2.50E-02	2.5E-02	DTSC	6.13E-02	6.13E-02	6.1E-02	USEPA
Nitroso-di-N-butylamine, N-	924-16-3	3.1E-03	OEHHA	--	--	1.75E-03	9.06E-04	9.1E-04	DTSC	--	--	--	--	7.67E-03	3.96E-03	4.0E-03	DTSC	--	--	--	--
Nitrotoluene, o-	88-72-2	5.5E-05	Route	3.6E+00	Route	--	5.10E-02	5.1E-02	DTSC	--	3.75E+00	3.8E+00	DTSC	--	2.23E-01	2.2E-01	DTSC	--	1.58E+01	1.6E+01	DTSC
Pebulate	1114-71-2	--	--	2.0E+02	Route	--	--	--	--	--	2.09E+02	2.1E+02	DTSC	--	--	--	--	--	8.76E+02	8.8E+02	DTSC
Pentabromodiphenyl Ether	32534-81-9	--	--	8.0E+00	Route	--	--	--	--	--	8.34E+00	8.3E+00	DTSC	--	--	--	--	--	3.50E+01	3.5E+01	DTSC
Pentachlorobenzene	608-93-5	--	--	3.2E+00	Route	--	--	--	--	--	3.34E+00	3.3E+00	DTSC	--	--	--	--	--	1.40E+01	1.4E+01	DTSC
Pentachloroethane	76-01-7	2.3E-05	Route	--	--	--	1.25E-01	1.2E-01	DTSC	--	--	--	--	--	5.45E-01	5.5E-01	DTSC	--	--	--	--
Pentachloronitrobenzene	82-68-8	6.5E-05	Route	1.2E+01	Route	--	4.32E-02	4.3E-02	DTSC	--	1.25E+01	1.3E+01	DTSC	--	1.89E-01	1.9E-01	DTSC	--	5.26E+01	5.3E+01	DTSC
Perfluorobutane Sulfonate	375-73-5	--	--	8.0E+01	Route	--	--	--	--	--	8.34E+01	8.3E+01	DTSC	--	--	--	--	--	3.50E+02	3.5E+02	DTSC
Phosphoric Acid	7664-38-2	--	--	7.0E+00	OEHHA	--	--	--	--	1.04E+01	7.30E+00	7.3E+00	DTSC	--	--	--	--	4.38E+01	3.07E+01	3.1E+01	DTSC
Phosphorus, White	7723-14-0	--	--	8.0E-02	Route	--	--	--	--	--	8.34E-02	8.3E-02	DTSC	--	--	--	--	--	3.50E-01	3.5E-01	DTSC
Phthalates																					
~Dimethylterephthalate	120-61-6	--	--	4.0E+02	Route	--	--	--	--	--	4.17E+02	4.2E+02	DTSC	--	--	--	--	--	1.75E+03	1.8E+03	DTSC
Polychlorinated Biphenyls (PCBs)																					
~Aroclor 1016	12674-11-2	2.0E-05	IRIS (lowest risk)	2.8E-01	Route	1.40E-01	1.40E-01	1.4E-01	USEPA	--	2.92E-01	2.9E-01	DTSC	6.13E-01	6.13E-01	6.1E-01	USEPA	--	1.23E+00	1.2E+00	DTSC
~Aroclor 1254	11097-69-1	5.7E-04	IRIS (highest risk)	8.0E-02	Route	4.92E-03	4.92E-03	4.9E-03	USEPA	--	8.34E-02	8.3E-02	DTSC	2.15E-02	2.15E-02	2.1E-02	USEPA	--	3.50E-01	3.5E-01	DTSC
~Aroclor 5460	11126-42-4	--	--	2.4E+00	Route	--	--	--	--	--	2.50E+00	2.5E+00	DTSC	--	--	--	--	--	1.05E+01	1.1E+01	DTSC

Table C-1. Air Screening Levels for Analytes with at least one DTSC-SL

		Toxicity Factor for Final Screening Value				Screening Levels for Residential Air (µg/m^3)								Screening Levels for Commercial/Industrial Air (µg/m^3)							
						Cancer Endpoint				Noncancer Endpoint				Cancer Endpoint				Noncancer Endpoint			
Analyte	**CAS #**	Inhalation Unit Risk, IUR (µg/m^3)$^{-1}$	Source	Reference Concentration, RfC or REL (µg/m^3)	Source	**USEPA RSL**	**DTSC-SL**	**Final Value**	**Source**	**USEPA RSL**	**DTSC-SL**	**Final Value**	**Source**	**USEPA RSL**	**DTSC-SL**	**Final Value**	**Source**	**USEPA RSL**	**DTSC-SL**	**Final Value**	**Source**
Polynuclear Aromatic Hydrocarbons (PAHs)																					
~Acenaphthene	83-32-9	--	--	2.4E+02	Route	--	--	--	--	--	2.50E+02	2.5E+02	DTSC	--	--	--	--	--	1.05E+03	1.1E+03	DTSC
~Anthracene	120-12-7	--	--	1.2E+03	Route	--	--	--	--	--	1.25E+03	1.3E+03	DTSC	--	--	--	--	--	5.26E+03	5.3E+03	DTSC
~Chloronaphthalene, Beta-	91-58-7	--	--	3.2E+02	Route	--	--	--	--	--	3.34E+02	3.3E+02	DTSC	--	--	--	--	--	1.40E+03	1.4E+03	DTSC
~Fluorene	86-73-7	--	--	1.6E+02	Route	--	--	--	--	--	1.67E+02	1.7E+02	DTSC	--	--	--	--	--	7.01E+02	7.0E+02	DTSC
~Methylnaphthalene, 1-	90-12-0	7.3E-06	Route	2.8E+02	Route	--	3.87E-01	3.9E-01	DTSC	--	2.92E+02	2.9E+02	DTSC	--	1.69E+00	1.7E+00	DTSC	--	1.23E+03	1.2E+03	DTSC
~Methylnaphthalene, 2-	91-57-6	--	--	1.6E+01	Route	--	--	--	--	--	1.67E+01	1.7E+01	DTSC	--	--	--	--	--	7.01E+01	7.0E+01	DTSC
~Pyrene	129-00-0	--	--	1.2E+02	Route	--	--	--	--	--	1.25E+02	1.3E+02	DTSC	--	--	--	--	--	5.26E+02	5.3E+02	DTSC
Profluralin	26399-36-0	--	--	2.4E+01	Route	--	--	--	--	--	2.50E+01	2.5E+01	DTSC	--	--	--	--	--	1.05E+02	1.1E+02	DTSC
Propargyl Alcohol	107-19-7	--	--	8.0E+00	Route	--	--	--	--	--	8.34E+00	8.3E+00	DTSC	--	--	--	--	--	3.50E+01	3.5E+01	DTSC
Pyridine	110-86-1	--	--	4.0E+00	Route	--	--	--	--	--	4.17E+00	4.2E+00	DTSC	--	--	--	--	--	1.75E+01	1.8E+01	DTSC
Ronnel	299-84-3	--	--	2.0E+02	Route	--	--	--	--	--	2.09E+02	2.1E+02	DTSC	--	--	--	--	--	8.76E+02	8.8E+02	DTSC
Styrene	100-42-5	--	--	9.0E+02	OEHHA	--	--	--	--	1.04E+03	9.39E+02	9.4E+02	DTSC	--	--	--	--	4.38E+03	3.94E+03	3.9E+03	DTSC
Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethyletl	140-57-8	8.6E-06	OEHHA	--	--	3.95E-01	3.26E-01	3.3E-01	DTSC	--	--	--	--	1.73E+00	1.43E+00	1.4E+00	DTSC	--	--	--	--
Terbufos	13071-79-9	--	--	1.0E-01	Route	--	--	--	--	--	1.04E-01	1.0E-01	DTSC	--	--	--	--	--	4.38E-01	4.4E-01	DTSC
Tetrachlorobenzene, 1,2,4,5-	95-94-3	--	--	1.2E+00	Route	--	--	--	--	--	1.25E+00	1.3E+00	DTSC	--	--	--	--	--	5.26E+00	5.3E+00	DTSC
Tetrachloroethane, 1,1,1,2-	630-20-6	7.4E-06	IRIS	1.2E+02	Route	3.79E-01	3.79E-01	3.8E-01	USEPA	--	1.25E+02	1.3E+02	DTSC	1.66E+00	1.66E+00	1.7E+00	USEPA	--	5.26E+02	5.3E+02	DTSC
Tetrachloroethane, 1,1,2,2-	79-34-5	5.8E-05	OEHHA	8.0E+01	Route	4.84E-02	4.84E-02	4.8E-02	USEPA	--	8.34E+01	8.3E+01	DTSC	2.11E-01	2.11E-01	2.1E-01	USEPA	--	3.50E+02	3.5E+02	DTSC
Tetrachloroethylene	127-18-4	5.9E-06	OEHHA	3.5E+01	OEHHA	1.08E+01	4.76E-01	4.8E-01	DTSC	4.17E+01	3.65E+01	3.7E+01	DTSC	4.72E+01	2.08E+00	2.1E+00	DTSC	1.75E+02	1.53E+02	1.5E+02	DTSC
Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	5.0E-03	Route	--	--	--	5.62E-04	5.6E-04	DTSC	--	--	--	--	--	2.45E-03	2.5E-03	DTSC	--	--	--	--
Thallium Acetate	563-68-8	--	--	2.4E-02	Route	--	--	--	--	--	2.50E-02	2.5E-02	DTSC	--	--	--	--	--	1.05E-01	1.1E-01	DTSC
Thallium Carbonate	6533-73-9	--	--	8.0E-02	Route	--	--	--	--	--	8.34E-02	8.3E-02	DTSC	--	--	--	--	--	3.50E-01	3.5E-01	DTSC
Toluene	108-88-3	--	--	3.0E+02	OEHHA	--	--	--	--	5.21E+03	3.13E+02	3.1E+02	DTSC	--	--	--	--	2.19E+04	1.31E+03	1.3E+03	DTSC
Toxaphene	8001-35-2	3.4E-04	OEHHA	--	--	8.77E-03	8.26E-03	8.3E-03	DTSC	--	--	--	--	3.83E-02	3.61E-02	3.6E-02	DTSC	--	--	--	--
Tri-n-butyltin	688-73-3	--	--	1.2E+00	Route	--	--	--	--	--	1.25E+00	1.3E+00	DTSC	--	--	--	--	--	5.26E+00	5.3E+00	DTSC
Triallate	2303-17-5	--	--	5.2E+01	Route	--	--	--	--	--	5.42E+01	5.4E+01	DTSC	--	--	--	--	--	2.28E+02	2.3E+02	DTSC
Tribromobenzene, 1,2,4-	615-54-3	--	--	2.0E+01	Route	--	--	--	--	--	2.09E+01	2.1E+01	DTSC	--	--	--	--	--	8.76E+01	8.8E+01	DTSC
Trichlorobenzene, 1,2,3-	87-61-6	--	--	3.2E+00	Route	--	--	--	--	--	3.34E+00	3.3E+00	DTSC	--	--	--	--	--	1.40E+01	1.4E+01	DTSC
Trichlorobenzene, 1,2,4-	120-82-1	7.3E-06	Route	2.0E+00	PPRTV	--	3.87E-01	3.9E-01	DTSC	2.09E+00	2.09E+00	2.1E+00	USEPA	--	1.69E+00	1.7E+00	DTSC	8.76E+00	8.76E+00	8.8E+00	USEPA
Trichloroethane, 1,1,1-	71-55-6	--	--	1.0E+03	OEHHA	--	--	--	--	5.21E+03	1.04E+03	1.0E+03	DTSC	--	--	--	--	2.19E+04	4.38E+03	4.4E+03	DTSC
Trichlorofluoromethane	75-69-4	--	--	1.2E+03	Route	--	--	--	--	--	1.25E+03	1.3E+03	DTSC	--	--	--	--	--	5.26E+03	5.3E+03	DTSC
Trichlorophenol, 2,4,6-	88-06-2	2.0E-05	OEHHA	--	--	9.06E-01	1.40E-01	1.4E-01	DTSC	--	--	--	--	3.96E+00	6.13E-01	6.1E-01	DTSC	--	--	--	--
Trichloropropane, 1,1,2-	598-77-6	--	--	2.0E+01	Route	--	--	--	--	--	2.09E+01	2.1E+01	DTSC	--	--	--	--	--	8.76E+01	8.8E+01	DTSC
Trichloropropane, 1,2,3-	96-18-4	7.5E-03	Route	3.0E-01	IRIS	--	1.35E-04	1.4E-04	DTSC	3.13E-01	3.13E-01	3.1E-01	USEPA	--	1.64E-03	1.6E-03	DTSC	1.31E+00	1.31E+00	1.3E+00	USEPA
Trifluralin	1582-09-8	1.9E-06	Route	3.0E+01	Route	--	1.46E+00	1.5E+00	DTSC	--	3.13E+01	3.1E+01	DTSC	--	6.37E+00	6.4E+00	DTSC	--	1.31E+02	1.3E+02	DTSC
Trimethylbenzene, 1,3,5-	108-67-8	--	--	4.0E+01	Route	--	--	--	--	--	4.17E+01	4.2E+01	DTSC	--	--	--	--	--	1.75E+02	1.8E+02	DTSC
Trimethylpentene, 2,4,4-	25167-70-8	--	--	4.0E+01	Route	--	--	--	--	--	4.17E+01	4.2E+01	DTSC	--	--	--	--	--	1.75E+02	1.8E+02	DTSC
Vernolate	1929-77-7	--	--	4.0E+00	Route	--	--	--	--	--	4.17E+00	4.2E+00	DTSC	--	--	--	--	--	1.75E+01	1.8E+01	DTSC
Vinyl Chloride	75-01-4	7.8E-05	OEHHA	1.0E+02	IRIS	1.68E-01	9.45E-03	9.5E-03	DTSC	1.04E+02	1.04E+02	1.0E+02	USEPA	2.79E+00	1.57E-01	1.6E-01	DTSC	4.38E+02	4.38E+02	4.4E+02	USEPA
Additional Analytes																					
Beryllium Sulfate	13510-49-1	8.6E-01	OEHHA	7.0E-03	OEHHA	1.17E-03	3.26E-06	3.3E-06	DTSC	2.09E-02	7.30E-03	7.3E-03	DTSC	5.11E-03	1.43E-05	1.4E-05	DTSC	8.76E-02	3.07E-02	3.1E-02	DTSC
Dichlorobenzene, 1,3-	541-73-1	--	--	1.2E+02	Route	--	--	--	--	--	1.25E+02	1.3E+02	DTSC	--	--	--	--	--	5.26E+02	5.3E+02	DTSC
Methylcyclohexane	108-87-2	--	--	6.0E+03	Cyclohexane	--	--	--	--	--	6.26E+03	6.3E+03	DTSC	--	--	--	--	--	2.63E+04	2.6E+04	DTSC

"--" = no value

Table C-2. USEPA RSLs and DTSC-SLs for Inhalation of Residential Air

Definition	Variable	USEPA Value	DTSC Value	
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	dimensionless
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	dimensionless
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	dimensionless
Age-dependent Adjustment Factor, 16-30	$ADAF_{16-30}$	1	1	dimensionless
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
COPC Concentration in indoor air	$C_{indoor\ air}$	chemical-specific		µg/m^3
Carcinogenic adjustment factor, inhalation	CAF_I	0.756	0.756	dimensionless
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-30	ED_{16-30}	10	10	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Duration, resident	ED_r	26	26	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Exposure Time, resident	ET_r	24	24	hours/day
Inhalation Unit-Risk Factor	IUR	chemical-specific		(µg/m^3)$^{-1}$
Mutagenic adjustment factor, inhalation	MAF_I	0.244	0.244	dimensionless
Inhalation Reference Concentration	RfC	chemical-specific		µg/m^3
(Regional) Screening Level	(R)SL	derived herein		
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	

RSL Derivation:

Carcinogens:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times ED_r \times EF_r \times ET_r}$$

Mutagens:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_r \times ET_r \times \left[\begin{array}{c}(ED_{0-2} \times IUR \times ADAF_{0-2}) + (ED_{2-6} \times IUR \times ADAF_{2-6}) \\ +(ED_{6-16} \times IUR \times ADAF_{6-16}) + (ED_{16-26} \times IUR \times ADAF_{16-26})\end{array}\right]}$$

Trichloroethene:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times EF_r \times ET_r \times \left[(CAF_I \times ED_r) + \left(\begin{array}{c}(MAF_I \times ED_{0-2} \times ADAF_{0-2}) + (MAF_I \times ED_{2-6} \times ADAF_{2-6}) \\ +(MAF_I \times ED_{6-16} \times ADAF_{6-16}) + (MAF_I \times ED_{16-26} \times ADAF_{16-26})\end{array}\right)\right]}$$

Vinyl Chloride:

$$(R)SL = \frac{TR}{IUR + \left(\frac{IUR \times EF_r \times ED_r \times ET_r \times \frac{1\ day}{24\ hour}}{AT_c \times 365\frac{days}{year}}\right)}$$

Noncancer Hazard:

$$(R)SL = \frac{THQ \times AT_{nc,c} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{\frac{1}{RfC} \times ED_c \times EF_r \times ET_r}$$

		USEPA Regional Screening Levels for Residential Air				DTSC Screening Levels for Residential Air			
Analyte	**Mutagen?**	**IUR** (µg/m^3)$^{-1}$	**USEPA RSL:Cancer** (µg/m^3)	**RfC** (µg/m^3)	**USEPA RSL: Noncancer** (µg/m^3)	**IUR** (µg/m^3)$^{-1}$	**DTSC-SL: Cancer** (µg/m^3)	**RfC** (µg/m^3)	**DTSC-SL: Noncancer** (µg/m^3)
USEPA RSL Analytes									
Acetaldehyde		2.20E-06	1.28E+00	9.00E+00	9.39E+00	2.70E-06	1.04E+00	9.00E+00	9.39E+00
Acetophenone		--	--	--	--	--	--	4.00E+02	4.17E+02
Acrylamide	M	1.00E-04	1.01E-02	6.00E+00	6.26E+00	1.30E-03	7.80E-04	6.00E+00	6.26E+00
Acrylonitrile		6.80E-05	4.13E-02	2.00E+00	2.09E+00	2.90E-04	9.68E-03	2.00E+00	2.09E+00
Aldrin		4.90E-03	5.73E-04	--	--	4.90E-03	5.73E-04	1.20E-01	1.25E-01
Arsine		--	--	5.00E-02	5.21E-02	--	--	1.50E-02	1.56E-02
Benfluralin		--	--	--	--	--	--	1.20E+03	1.25E+03
Benzaldehyde		--	--	--	--	--	--	4.00E+02	4.17E+02
Benzene		7.80E-06	3.60E-01	3.00E+01	3.13E+01	2.90E-05	9.68E-02	3.00E+00	3.13E+00
Benzenethiol		--	--	--	--	--	--	4.00E+00	4.17E+00
Benzidine	M	6.70E-02	1.51E-05	--	--	1.40E-01	7.24E-06	--	--
Benzotrichloride		--	--	--	--	3.25E-03	8.64E-04	--	--
Beryllium and compounds		2.40E-03	1.17E-03	2.00E-02	2.09E-02	2.40E-03	1.17E-03	7.00E-03	7.30E-03
Biphenyl, 1,1'-		--	--	4.00E-01	4.17E-01	2.00E-06	1.40E+00	4.00E-01	4.17E-01
Bis(2-chloro-1-methylethyl) ether		--	--	--	--	--	--	1.60E+02	1.67E+02
Bis(2-chloroethyl)ether		3.30E-04	8.51E-03	--	--	7.10E-04	3.95E-03	--	--
Boron Trifluoride		--	--	1.30E+01	1.36E+01	--	--	7.00E-01	7.30E-01

Table C-2. USEPA RSLs and DTSC-SLs for Inhalation of Residential Air

Definition	Variable	USEPA Value	DTSC Value	
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	dimensionless
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	dimensionless
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	dimensionless
Age-dependent Adjustment Factor, 16-30	$ADAF_{16-30}$	1	1	dimensionless
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
COPC Concentration in indoor air	$C_{indoor\ air}$	chemical-specific		µg/m^3
Carcinogenic adjustment factor, inhalation	CAF_I	0.756	0.756	dimensionless
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-30	ED_{16-30}	10	10	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Duration, resident	ED_r	26	26	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Exposure Time, resident	ET_r	24	24	hours/day
Inhalation Unit-Risk Factor	IUR	chemical-specific		(µg/m^3)$^{-1}$
Mutagenic adjustment factor, inhalation	MAF_I	0.244	0.244	dimensionless
Inhalation Reference Concentration	RfC	chemical-specific		µg/m^3
(Regional) Screening Level	(R)SL	derived herein		
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	

RSL Derivation:

Carcinogens:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times ED_r \times EF_r \times ET_r}$$

Mutagens:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_r \times ET_r \times \left[\begin{array}{c}(ED_{0-2} \times IUR \times ADAF_{0-2}) + (ED_{2-6} \times IUR \times ADAF_{2-6}) \\ +(ED_{6-16} \times IUR \times ADAF_{6-16}) + (ED_{16-26} \times IUR \times ADAF_{16-26})\end{array}\right]}$$

Trichloroethene:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times EF_r \times ET_r \times \left[(CAF_I \times ED_r) + \left(\begin{array}{c}(MAF_I \times ED_{0-2} \times ADAF_{0-2}) + (MAF_I \times ED_{2-6} \times ADAF_{2-6}) \\ +(MAF_I \times ED_{6-16} \times ADAF_{6-16}) + (MAF_I \times ED_{16-26} \times ADAF_{16-26})\end{array}\right)\right]}$$

Vinyl Chloride:

$$(R)SL = \frac{TR}{IUR + \left(\frac{IUR \times EF_r \times ED_r \times ET_r \times \frac{1\ day}{24\ hour}}{AT_c \times 365\frac{days}{year}}\right)}$$

Noncancer Hazard:

$$(R)SL = \frac{THQ \times AT_{nc,c} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{\frac{1}{RfC} \times ED_c \times EF_r \times ET_r}$$

		USEPA Regional Screening Levels for Residential Air				DTSC Screening Levels for Residential Air			
		IUR	USEPA RSL:Cancer	RfC	USEPA RSL: Noncancer	IUR	DTSC-SL: Cancer	RfC	DTSC-SL: Noncancer
Analyte	**Mutagen?**	(µg/m^3)$^{-1}$	(µg/m^3)	(µg/m^3)	(µg/m^3)	(µg/m^3)$^{-1}$	(µg/m^3)	(µg/m^3)	(µg/m^3)
Bromodichloromethane		3.70E-05	7.59E-02	--	--	3.70E-05	7.59E-02	8.00E+01	8.34E+01
Bromoform		1.10E-06	2.55E+00	--	--	1.10E-06	2.55E+00	8.00E+01	8.34E+01
Bromophos		--	--	--	--	--	--	2.00E+01	2.09E+01
Bromoxynil Octanoate		--	--	--	--	--	--	8.00E+01	8.34E+01
Butadiene, 1,3-		3.00E-05	9.36E-02	2.00E+00	2.09E+00	1.70E-04	1.65E-02	2.00E+00	2.09E+00
Butanol, N-		--	--	--	--	--	--	4.00E+02	4.17E+02
Butylate		--	--	--	--	--	--	2.00E+02	2.09E+02
Butylbenzene, n-		--	--	--	--	--	--	2.00E+02	2.09E+02
Butylbenzene, sec-		--	--	--	--	--	--	4.00E+02	4.17E+02
Butylbenzene, tert-		--	--	--	--	--	--	4.00E+02	4.17E+02
Cadmium (Water)		1.80E-03	1.56E-03	1.00E-02	1.04E-02	4.20E-03	6.68E-04	1.00E-02	1.04E-02
Carbon Tetrachloride		6.00E-06	4.68E-01	1.00E+02	1.04E+02	4.20E-05	6.68E-02	4.00E+01	4.17E+01
Chloral Hydrate		--	--	--	--	--	--	4.00E+02	4.17E+02
Chlordane		1.00E-04	2.81E-02	7.00E-01	7.30E-01	3.40E-04	8.26E-03	7.00E-01	7.30E-01
Chloroacetaldehyde, 2-		--	--	--	--	6.75E-05	4.16E-02	--	--
Chlorobenzilate		3.10E-05	9.06E-02	--	--	7.80E-05	3.60E-02	--	--
Chlorobutane, 1-		--	--	--	--	--	--	1.60E+02	1.67E+02
Chloroethanol, 2-		--	--	--	--	--	--	8.00E+01	8.34E+01

Table C-2. USEPA RSLs and DTSC-SLs for Inhalation of Residential Air

Definition	Variable	USEPA Value	DTSC Value	
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	dimensionless
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	dimensionless
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	dimensionless
Age-dependent Adjustment Factor, 16-30	$ADAF_{16-30}$	1	1	dimensionless
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
COPC Concentration in indoor air	$C_{indoor\ air}$	chemical-specific		µg/m^3
Carcinogenic adjustment factor, inhalation	CAF_I	0.756	0.756	dimensionless
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-30	ED_{16-30}	10	10	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Duration, resident	ED_r	26	26	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Exposure Time, resident	ET_r	24	24	hours/day
Inhalation Unit-Risk Factor	IUR	chemical-specific		(µg/m^3)$^{-1}$
Mutagenic adjustment factor, inhalation	MAF_I	0.244	0.244	dimensionless
Inhalation Reference Concentration	RfC	chemical-specific		µg/m^3
(Regional) Screening Level	(R)SL	derived herein		
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	

RSL Derivation:

Carcinogens:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times ED_r \times EF_r \times ET_r}$$

Mutagens:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_r \times ET_r \times \left[\begin{array}{c}(ED_{0-2} \times IUR \times ADAF_{0-2}) + (ED_{2-6} \times IUR \times ADAF_{2-6}) \\ +(ED_{6-16} \times IUR \times ADAF_{6-16}) + (ED_{16-26} \times IUR \times ADAF_{16-26})\end{array}\right]}$$

Trichloroethene:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times EF_r \times ET_r \times \left[(CAF_I \times ED_r) + \left(\begin{array}{c}(MAF_I \times ED_{0-2} \times ADAF_{0-2}) + (MAF_I \times ED_{2-6} \times ADAF_{2-6}) \\ +(MAF_I \times ED_{6-16} \times ADAF_{6-16}) + (MAF_I \times ED_{16-26} \times ADAF_{16-26})\end{array}\right)\right]}$$

Vinyl Chloride:

$$(R)SL = \frac{TR}{IUR + \left(\frac{IUR \times EF_r \times ED_r \times ET_r \times \frac{1\ day}{24\ hour}}{AT_c \times 365\frac{days}{year}}\right)}$$

Noncancer Hazard:

$$(R)SL = \frac{THQ \times AT_{nc,c} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{\frac{1}{RfC} \times ED_c \times EF_r \times ET_r}$$

		USEPA Regional Screening Levels for Residential Air				DTSC Screening Levels for Residential Air			
		IUR	USEPA RSL:Cancer	RfC	USEPA RSL: Noncancer	IUR	DTSC-SL: Cancer	RfC	DTSC-SL: Noncancer
Analyte	**Mutagen?**	(µg/m^3)$^{-1}$	(µg/m^3)	(µg/m^3)	(µg/m^3)	(µg/m^3)$^{-1}$	(µg/m^3)	(µg/m^3)	(µg/m^3)
Chlorophenol, 2-		--	--	--	--	--	--	2.00E+01	2.09E+01
Chlorotoluene, o-		--	--	--	--	--	--	8.00E+01	8.34E+01
Chlorotoluene, p-		--	--	--	--	--	--	8.00E+01	8.34E+01
Crotonaldehyde, trans-		--	--	--	--	4.75E-04	5.91E-03	4.00E+00	4.17E+00
Cyanides									
~Cyanogen		--	--	--	--	--	--	4.00E+00	4.17E+00
~Cyanogen Bromide		--	--	--	--	--	--	3.60E+02	3.75E+02
~Cyanogen Chloride		--	--	--	--	--	--	2.00E+02	2.09E+02
~Thiocyanic Acid		--	--	--	--	--	--	8.00E-01	8.34E-01
Cyclohexylamine		--	--	--	--	--	--	8.00E+02	8.34E+02
Dibenzothiophene		--	--	--	--	--	--	4.00E+01	4.17E+01
Dibromobenzene, 1,3-		--	--	--	--	--	--	1.60E+00	1.67E+00
Dibromobenzene, 1,4-		--	--	--	--	--	--	4.00E+01	4.17E+01
Dibromochloromethane		--	--	--	--	2.10E-05	1.34E-01	8.00E+01	8.34E+01
Dibromoethane, 1,2-		6.00E-04	4.68E-03	9.00E+00	9.39E+00	6.00E-04	4.68E-03	8.00E-01	8.34E-01
Dichloroethane, 1,1-		1.60E-06	1.75E+00	--	--	1.60E-06	1.75E+00	8.00E+02	8.34E+02
Dichloroethylene, 1,1-		--	--	2.00E+02	2.09E+02	--	--	7.00E+01	7.30E+01

Table C-2. USEPA RSLs and DTSC-SLs for Inhalation of Residential Air

Definition	Variable	USEPA Value	DTSC Value	
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	dimensionless
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	dimensionless
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	dimensionless
Age-dependent Adjustment Factor, 16-30	$ADAF_{16-30}$	1	1	dimensionless
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
COPC Concentration in indoor air	$C_{indoor\ air}$	chemical-specific		µg/m^3
Carcinogenic adjustment factor, inhalation	CAF_I	0.756	0.756	dimensionless
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-30	ED_{16-30}	10	10	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Duration, resident	ED_r	26	26	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Exposure Time, resident	ET_r	24	24	hours/day
Inhalation Unit-Risk Factor	IUR	chemical-specific		(µg/m^3)$^{-1}$
Mutagenic adjustment factor, inhalation	MAF_I	0.244	0.244	dimensionless
Inhalation Reference Concentration	RfC	chemical-specific		µg/m^3
(Regional) Screening Level	(R)SL	derived herein		
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	

RSL Derivation:

Carcinogens:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times ED_r \times EF_r \times ET_r}$$

Mutagens:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_r \times ET_r \times \left[\begin{array}{c}(ED_{0-2} \times IUR \times ADAF_{0-2}) + (ED_{2-6} \times IUR \times ADAF_{2-6}) \\ +(ED_{6-16} \times IUR \times ADAF_{6-16}) + (ED_{16-26} \times IUR \times ADAF_{16-26})\end{array}\right]}$$

Trichloroethene:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times EF_r \times ET_r \times \left[(CAF_I \times ED_r) + \left(\begin{array}{c}(MAF_I \times ED_{0-2} \times ADAF_{0-2}) + (MAF_I \times ED_{2-6} \times ADAF_{2-6}) \\ +(MAF_I \times ED_{6-16} \times ADAF_{6-16}) + (MAF_I \times ED_{16-26} \times ADAF_{16-26})\end{array}\right)\right]}$$

Vinyl Chloride:

$$(R)SL = \frac{TR}{IUR + \left(\frac{IUR \times EF_r \times ED_r \times ET_r \times \frac{1\ day}{24\ hour}}{AT_c \times 365\frac{days}{year}}\right)}$$

Noncancer Hazard:

$$(R)SL = \frac{THQ \times AT_{nc,c} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{\frac{1}{RfC} \times ED_c \times EF_r \times ET_r}$$

		USEPA Regional Screening Levels for Residential Air				DTSC Screening Levels for Residential Air			
		IUR	USEPA RSL:Cancer	RfC	USEPA RSL: Noncancer	IUR	DTSC-SL: Cancer	RfC	DTSC-SL: Noncancer
Analyte	**Mutagen?**	(µg/m^3)$^{-1}$	(µg/m^3)	(µg/m^3)	(µg/m^3)	(µg/m^3)$^{-1}$	(µg/m^3)	(µg/m^3)	(µg/m^3)
Dichloroethylene, 1,2-cis-		--	--	--	--	--	--	8.00E+00	8.34E+00
Dichloroethylene, 1,2-trans-		--	--	--	--	--	--	8.00E+01	8.34E+01
Dichloropropane, 1,3-		--	--	--	--	--	--	8.00E+01	8.34E+01
Dichloropropene, 1,3-		4.00E-06	7.02E-01	2.00E+01	2.09E+01	1.60E-05	1.75E-01	2.00E+01	2.09E+01
Dieldrin		4.60E-03	6.10E-04	--	--	4.60E-03	6.10E-04	2.00E-01	2.09E-01
Diethylformamide		--	--	--	--	--	--	4.00E+00	4.17E+00
Diisopropyl Methylphosphonate		--	--	--	--	--	--	3.20E+02	3.34E+02
Dimethylaniline, N,N-		--	--	--	--	--	--	8.00E+00	8.34E+00
Dioxane, 1,4-		5.00E-06	5.62E-01	3.00E+01	3.13E+01	7.70E-06	3.65E-01	3.00E+01	3.13E+01
Dioxins									
~Hexachlorodibenzo-p-dioxin, Mixture		1.30E+00	2.16E-06	--	--	3.80E+00	7.39E-07	--	--
Diphenylhydrazine, 1,2-		2.20E-04	1.28E-02	--	--	2.50E-04	1.12E-02	--	--
Dithiane, 1,4-		--	--	--	--	--	--	4.00E+01	4.17E+01
EPTC		--	--	--	--	--	--	1.00E+02	1.04E+02
Endosulfan		--	--	--	--	--	--	2.40E+01	2.50E+01
Epichlorohydrin		1.20E-06	2.34E+00	1.00E+00	1.04E+00	2.30E-05	1.22E-01	1.00E+00	1.04E+00
Ethoxyethanol, 2-		--	--	2.00E+02	2.09E+02	--	--	7.00E+01	7.30E+01
Ethyl Chloride (Chloroethane)		--	--	1.00E+04	1.04E+04	1.18E-06	2.39E+00	1.00E+04	1.04E+04

Table C-2. USEPA RSLs and DTSC-SLs for Inhalation of Residential Air

Definition	Variable	USEPA Value	DTSC Value	
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	dimensionless
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	dimensionless
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	dimensionless
Age-dependent Adjustment Factor, 16-30	$ADAF_{16-30}$	1	1	dimensionless
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
COPC Concentration in indoor air	$C_{indoor\ air}$	chemical-specific		µg/m^3
Carcinogenic adjustment factor, inhalation	CAF_I	0.756	0.756	dimensionless
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-30	ED_{16-30}	10	10	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Duration, resident	ED_r	26	26	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Exposure Time, resident	ET_r	24	24	hours/day
Inhalation Unit-Risk Factor	IUR	chemical-specific		(µg/m^3)$^{-1}$
Mutagenic adjustment factor, inhalation	MAF_I	0.244	0.244	dimensionless
Inhalation Reference Concentration	RfC	chemical-specific		µg/m^3
(Regional) Screening Level	(R)SL	derived herein		
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	

RSL Derivation:

Carcinogens:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times ED_r \times EF_r \times ET_r}$$

Mutagens:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_r \times ET_r \times \left[\begin{array}{c}(ED_{0-2} \times IUR \times ADAF_{0-2}) + (ED_{2-6} \times IUR \times ADAF_{2-6}) \\ +(ED_{6-16} \times IUR \times ADAF_{6-16}) + (ED_{16-26} \times IUR \times ADAF_{16-26})\end{array}\right]}$$

Trichloroethene:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times EF_r \times ET_r \times \left[(CAF_I \times ED_r) + \left(\begin{array}{c}(MAF_I \times ED_{0-2} \times ADAF_{0-2}) + (MAF_I \times ED_{2-6} \times ADAF_{2-6}) \\ +(MAF_I \times ED_{6-16} \times ADAF_{6-16}) + (MAF_I \times ED_{16-26} \times ADAF_{16-26})\end{array}\right)\right]}$$

Vinyl Chloride:

$$(R)SL = \frac{TR}{IUR + \left(\frac{IUR \times EF_r \times ED_r \times ET_r \times \frac{1\ day}{24\ hour}}{AT_c \times 365\frac{days}{year}}\right)}$$

Noncancer Hazard:

$$(R)SL = \frac{THQ \times AT_{nc,c} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{\frac{1}{RfC} \times ED_c \times EF_r \times ET_r}$$

		USEPA Regional Screening Levels for Residential Air				DTSC Screening Levels for Residential Air			
		IUR	USEPA RSL:Cancer	RfC	USEPA RSL: Noncancer	IUR	DTSC-SL: Cancer	RfC	DTSC-SL: Noncancer
Analyte	**Mutagen?**	(µg/m^3)$^{-1}$	(µg/m^3)	(µg/m^3)	(µg/m^3)	(µg/m^3)$^{-1}$	(µg/m^3)	(µg/m^3)	(µg/m^3)
Ethyl Ether		--	--	--	--	--	--	8.00E+02	8.34E+02
Ethylene Diamine		--	--	--	--	--	--	3.60E+02	3.75E+02
Formaldehyde		1.30E-05	2.16E-01	9.80E+00	1.02E+01	1.30E-05	2.16E-01	9.00E+00	9.39E+00
Furans									
~Dibenzofuran		--	--	--	--	--	--	4.00E+00	4.17E+00
~Furan		--	--	--	--	--	--	4.00E+00	4.17E+00
Guanidine		--	--	--	--	--	--	4.00E+01	4.17E+01
Heptachlor		1.30E-03	2.16E-03	--	--	1.30E-03	2.16E-03	2.00E+00	2.09E+00
Heptachlor Epoxide		2.60E-03	1.08E-03	--	--	2.60E-03	1.08E-03	5.20E-02	5.42E-02
Hexabromobenzene		--	--	--	--	--	--	8.00E+00	8.34E+00
Hexachlorobenzene		4.60E-04	6.10E-03	--	--	5.10E-04	5.51E-03	3.20E+00	3.34E+00
Hexachlorobutadiene		2.20E-05	1.28E-01	--	--	2.20E-05	1.28E-01	4.00E+00	4.17E+00
Hexachlorocyclohexane, Alpha-		1.80E-03	1.56E-03	--	--	1.80E-03	1.56E-03	3.20E+01	3.34E+01
Hexachlorocyclohexane, Gamma- (Lindane)		3.10E-04	9.06E-03	--	--	3.10E-04	9.06E-03	1.20E+00	1.25E+00
Hexachlorocyclohexane, Technical		5.10E-04	5.51E-03	--	--	1.10E-03	2.55E-03	--	--
Hydrogen Chloride		--	--	2.00E+01	2.09E+01	--	--	9.00E+00	9.39E+00
Isobutyl Alcohol		--	--	--	--	--	--	1.20E+03	1.25E+03
Isopropalin		--	--	--	--	--	--	6.00E+01	6.26E+01

Table C-2. USEPA RSLs and DTSC-SLs for Inhalation of Residential Air

Definition	Variable	USEPA Value	DTSC Value	
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	dimensionless
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	dimensionless
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	dimensionless
Age-dependent Adjustment Factor, 16-30	$ADAF_{16-30}$	1	1	dimensionless
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
COPC Concentration in indoor air	$C_{indoor\ air}$	chemical-specific		µg/m^3
Carcinogenic adjustment factor, inhalation	CAF_I	0.756	0.756	dimensionless
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-30	ED_{16-30}	10	10	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Duration, resident	ED_r	26	26	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Exposure Time, resident	ET_r	24	24	hours/day
Inhalation Unit-Risk Factor	IUR	chemical-specific		(µg/m^3)$^{-1}$
Mutagenic adjustment factor, inhalation	MAF_I	0.244	0.244	dimensionless
Inhalation Reference Concentration	RfC	chemical-specific		µg/m^3
(Regional) Screening Level	(R)SL	derived herein		
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	

RSL Derivation:

Carcinogens:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times ED_r \times EF_r \times ET_r}$$

Mutagens:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_r \times ET_r \times \left[\begin{array}{c}(ED_{0-2} \times IUR \times ADAF_{0-2}) + (ED_{2-6} \times IUR \times ADAF_{2-6}) \\ +(ED_{6-16} \times IUR \times ADAF_{6-16}) + (ED_{16-26} \times IUR \times ADAF_{16-26})\end{array}\right]}$$

Trichloroethene:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times EF_r \times ET_r \times \left[(CAF_I \times ED_r) + \left(\begin{array}{c}(MAF_I \times ED_{0-2} \times ADAF_{0-2}) + (MAF_I \times ED_{2-6} \times ADAF_{2-6}) \\ +(MAF_I \times ED_{6-16} \times ADAF_{6-16}) + (MAF_I \times ED_{16-26} \times ADAF_{16-26})\end{array}\right)\right]}$$

Vinyl Chloride:

$$(R)SL = \frac{TR}{IUR + \left(\frac{IUR \times EF_r \times ED_r \times ET_r \times \frac{1\ day}{24\ hour}}{AT_c \times 365\frac{days}{year}}\right)}$$

Noncancer Hazard:

$$(R)SL = \frac{THQ \times AT_{nc,c} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{\frac{1}{RfC} \times ED_c \times EF_r \times ET_r}$$

		USEPA Regional Screening Levels for Residential Air				DTSC Screening Levels for Residential Air			
Analyte	**Mutagen?**	**IUR** (µg/m^3)$^{-1}$	**USEPA RSL:Cancer** (µg/m^3)	**RfC** (µg/m^3)	**USEPA RSL: Noncancer** (µg/m^3)	**IUR** (µg/m^3)$^{-1}$	**DTSC-SL: Cancer** (µg/m^3)	**RfC** (µg/m^3)	**DTSC-SL: Noncancer** (µg/m^3)
Lead Compounds									
~Tetraethyl Lead		--	--	--	--	--	--	4.00E-04	4.17E-04
Lewisite		--	--	--	--	--	--	2.00E-02	2.09E-02
Mercury Compounds									
~Mercuric Chloride (and other Mercury salts)		--	--	3.00E-01	3.13E-01	--	--	3.00E-02	3.13E-02
~Mercury (elemental)		--	--	3.00E-01	3.13E-01	--	--	3.00E-02	3.13E-02
Merphos		--	--	--	--	--	--	1.20E-01	1.25E-01
Methanol		--	--	2.00E+04	2.09E+04	--	--	4.00E+03	4.17E+03
Methoxychlor		--	--	--	--	--	--	2.00E+01	2.09E+01
Methyl Acetate		--	--	--	--	--	--	4.00E+03	4.17E+03
Methylene Chloride	M	1.00E-08	1.01E+02	6.00E+02	6.26E+02	1.00E-06	1.01E+00	4.00E+02	4.17E+02
Methylstyrene, Alpha-		--	--	--	--	--	--	2.80E+02	2.92E+02
Mineral oils		--	--	--	--	--	--	1.20E+04	1.25E+04
Mirex		5.10E-03	5.51E-04	--	--	5.10E-03	5.51E-04	8.00E-01	8.34E-01
Naled		--	--	--	--	--	--	8.00E+00	8.34E+00
Naphthylamine, 2-		--	--	--	--	5.10E-04	5.51E-03	--	--

Table C-2. USEPA RSLs and DTSC-SLs for Inhalation of Residential Air

Definition	Variable	USEPA Value	DTSC Value	
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	dimensionless
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	dimensionless
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	dimensionless
Age-dependent Adjustment Factor, 16-30	$ADAF_{16-30}$	1	1	dimensionless
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
COPC Concentration in indoor air	$C_{indoor\ air}$	chemical-specific		µg/m^3
Carcinogenic adjustment factor, inhalation	CAF_I	0.756	0.756	dimensionless
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-30	ED_{16-30}	10	10	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Duration, resident	ED_r	26	26	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Exposure Time, resident	ET_r	24	24	hours/day
Inhalation Unit-Risk Factor	IUR	chemical-specific		(µg/m^3)$^{-1}$
Mutagenic adjustment factor, inhalation	MAF_I	0.244	0.244	dimensionless
Inhalation Reference Concentration	RfC	chemical-specific		µg/m^3
(Regional) Screening Level	(R)SL	derived herein		
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	

RSL Derivation:

Carcinogens:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times ED_r \times EF_r \times ET_r}$$

Mutagens:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_r \times ET_r \times \left[\begin{array}{c}(ED_{0-2} \times IUR \times ADAF_{0-2}) + (ED_{2-6} \times IUR \times ADAF_{2-6}) \\ +(ED_{6-16} \times IUR \times ADAF_{6-16}) + (ED_{16-26} \times IUR \times ADAF_{16-26})\end{array}\right]}$$

Trichloroethene:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times EF_r \times ET_r \times \left[(CAF_I \times ED_r) + \left(\begin{array}{c}(MAF_I \times ED_{0-2} \times ADAF_{0-2}) + (MAF_I \times ED_{2-6} \times ADAF_{2-6}) \\ +(MAF_I \times ED_{6-16} \times ADAF_{6-16}) + (MAF_I \times ED_{16-26} \times ADAF_{16-26})\end{array}\right)\right]}$$

Vinyl Chloride:

$$(R)SL = \frac{TR}{IUR + \left(\frac{IUR \times EF_r \times ED_r \times ET_r \times \frac{1\ day}{24\ hour}}{AT_c \times 365\frac{days}{year}}\right)}$$

Noncancer Hazard:

$$(R)SL = \frac{THQ \times AT_{nc,c} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{\frac{1}{RfC} \times ED_c \times EF_r \times ET_r}$$

		USEPA Regional Screening Levels for Residential Air				DTSC Screening Levels for Residential Air			
Analyte	**Mutagen?**	**IUR** (µg/m^3)$^{-1}$	**USEPA RSL:Cancer** (µg/m^3)	**RfC** (µg/m^3)	**USEPA RSL: Noncancer** (µg/m^3)	**IUR** (µg/m^3)$^{-1}$	**DTSC-SL: Cancer** (µg/m^3)	**RfC** (µg/m^3)	**DTSC-SL: Noncancer** (µg/m^3)
Nickel Refinery Dust		2.40E-04	1.17E-02	1.40E-02	1.46E-02	2.60E-04	1.08E-02	1.40E-02	1.46E-02
Nickel Soluble Salts		2.60E-04	1.08E-02	9.00E-02	9.39E-02	2.60E-04	1.08E-02	1.40E-02	1.46E-02
Nickel Subsulfide		4.80E-04	5.85E-03	1.40E-02	1.46E-02	4.90E-04	5.73E-03	1.40E-02	1.46E-02
Nitroso-di-N-butylamine, N-		1.60E-03	1.75E-03	--	--	3.10E-03	9.06E-04	--	--
Nitrotoluene, o-		--	--	--	--	5.50E-05	5.10E-02	3.60E+00	3.75E+00
Pebulate		--	--	--	--	--	--	2.00E+02	2.09E+02
Pentabromodiphenyl Ether		--	--	--	--	--	--	8.00E+00	8.34E+00
Pentachlorobenzene		--	--	--	--	--	--	3.20E+00	3.34E+00
Pentachloroethane		--	--	--	--	2.25E-05	1.25E-01	--	--
Pentachloronitrobenzene		--	--	--	--	6.50E-05	4.32E-02	1.20E+01	1.25E+01
Perfluorobutane Sulfonate		--	--	--	--	--	--	8.00E+01	8.34E+01
Phosphoric Acid		--	--	1.00E+01	1.04E+01	--	--	7.00E+00	7.30E+00
Phosphorus, White		--	--	--	--	--	--	8.00E-02	8.34E-02
Phthalates									
~Dimethylterephthalate		--	--	--	--	--	--	4.00E+02	4.17E+02

Table C-2. USEPA RSLs and DTSC-SLs for Inhalation of Residential Air

Definition	Variable	USEPA Value	DTSC Value	
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	dimensionless
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	dimensionless
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	dimensionless
Age-dependent Adjustment Factor, 16-30	$ADAF_{16-30}$	1	1	dimensionless
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
COPC Concentration in indoor air	$C_{indoor\ air}$	chemical-specific		µg/m^3
Carcinogenic adjustment factor, inhalation	CAF_I	0.756	0.756	dimensionless
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-30	ED_{16-30}	10	10	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Duration, resident	ED_r	26	26	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Exposure Time, resident	ET_r	24	24	hours/day
Inhalation Unit-Risk Factor	IUR	chemical-specific		(µg/m^3)$^{-1}$
Mutagenic adjustment factor, inhalation	MAF_I	0.244	0.244	dimensionless
Inhalation Reference Concentration	RfC	chemical-specific		µg/m^3
(Regional) Screening Level	(R)SL	derived herein		
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	

RSL Derivation:

Carcinogens:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times ED_r \times EF_r \times ET_r}$$

Mutagens:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_r \times ET_r \times \left[\begin{array}{c}(ED_{0-2} \times IUR \times ADAF_{0-2}) + (ED_{2-6} \times IUR \times ADAF_{2-6}) \\ +(ED_{6-16} \times IUR \times ADAF_{6-16}) + (ED_{16-26} \times IUR \times ADAF_{16-26})\end{array}\right]}$$

Trichloroethene:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times EF_r \times ET_r \times \left[(CAF_I \times ED_r) + \left(\begin{array}{c}(MAF_I \times ED_{0-2} \times ADAF_{0-2}) + (MAF_I \times ED_{2-6} \times ADAF_{2-6}) \\ +(MAF_I \times ED_{6-16} \times ADAF_{6-16}) + (MAF_I \times ED_{16-26} \times ADAF_{16-26})\end{array}\right)\right]}$$

Vinyl Chloride:

$$(R)SL = \frac{TR}{IUR + \left(\frac{IUR \times EF_r \times ED_r \times ET_r \times \frac{1\ day}{24\ hour}}{AT_c \times 365\frac{days}{year}}\right)}$$

Noncancer Hazard:

$$(R)SL = \frac{THQ \times AT_{nc,c} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{\frac{1}{RfC} \times ED_c \times EF_r \times ET_r}$$

		USEPA Regional Screening Levels for Residential Air				DTSC Screening Levels for Residential Air			
Analyte	**Mutagen?**	**IUR** (µg/m^3)$^{-1}$	**USEPA RSL:Cancer** (µg/m^3)	**RfC** (µg/m^3)	**USEPA RSL: Noncancer** (µg/m^3)	**IUR** (µg/m^3)$^{-1}$	**DTSC-SL: Cancer** (µg/m^3)	**RfC** (µg/m^3)	**DTSC-SL: Noncancer** (µg/m^3)
Polychlorinated Biphenyls (PCBs)									
~Aroclor 1016		2.00E-05	1.40E-01	--	--	2.00E-05	1.40E-01	2.80E-01	2.92E-01
~Aroclor 1254		5.71E-04	4.92E-03	--	--	5.71E-04	4.92E-03	8.00E-02	8.34E-02
~Aroclor 5460		--	--	--	--	--	--	2.40E+00	2.50E+00
Polynuclear Aromatic Hydrocarbons (PAHs)									
~Acenaphthene		--	--	--	--	--	--	2.40E+02	2.50E+02
~Anthracene		--	--	--	--	--	--	1.20E+03	1.25E+03
~Chloronaphthalene, Beta-		--	--	--	--	--	--	3.20E+02	3.34E+02
~Fluorene		--	--	--	--	--	--	1.60E+02	1.67E+02
~Methylnaphthalene, 1-		--	--	--	--	7.25E-06	3.87E-01	2.80E+02	2.92E+02
~Methylnaphthalene, 2-		--	--	--	--	--	--	1.60E+01	1.67E+01
~Pyrene		--	--	--	--	--	--	1.20E+02	1.25E+02
Profluralin		--	--	--	--	--	--	2.40E+01	2.50E+01
Propargyl Alcohol		--	--	--	--	--	--	8.00E+00	8.34E+00
Pyridine		--	--	--	--	--	--	4.00E+00	4.17E+00
Ronnel		--	--	--	--	--	--	2.00E+02	2.09E+02
Styrene		--	--	1.00E+03	1.04E+03	--	--	9.00E+02	9.39E+02
Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimeth		7.10E-06	3.95E-01	--	--	8.60E-06	3.26E-01	--	--

Table C-2. USEPA RSLs and DTSC-SLs for Inhalation of Residential Air

Definition	Variable	USEPA Value	DTSC Value	
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	dimensionless
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	dimensionless
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	dimensionless
Age-dependent Adjustment Factor, 16-30	$ADAF_{16-30}$	1	1	dimensionless
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
COPC Concentration in indoor air	$C_{indoor\ air}$	chemical-specific		µg/m^3
Carcinogenic adjustment factor, inhalation	CAF_I	0.756	0.756	dimensionless
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-30	ED_{16-30}	10	10	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Duration, resident	ED_r	26	26	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Exposure Time, resident	ET_r	24	24	hours/day
Inhalation Unit-Risk Factor	IUR	chemical-specific		(µg/m^3)$^{-1}$
Mutagenic adjustment factor, inhalation	MAF_I	0.244	0.244	dimensionless
Inhalation Reference Concentration	RfC	chemical-specific		µg/m^3
(Regional) Screening Level	(R)SL	derived herein		
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	

RSL Derivation:

Carcinogens:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times ED_r \times EF_r \times ET_r}$$

Mutagens:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_r \times ET_r \times \left[\begin{array}{c}(ED_{0-2} \times IUR \times ADAF_{0-2}) + (ED_{2-6} \times IUR \times ADAF_{2-6}) \\ +(ED_{6-16} \times IUR \times ADAF_{6-16}) + (ED_{16-26} \times IUR \times ADAF_{16-26})\end{array}\right]}$$

Trichloroethene:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times EF_r \times ET_r \times \left[(CAF_I \times ED_r) + \left(\begin{array}{c}(MAF_I \times ED_{0-2} \times ADAF_{0-2}) + (MAF_I \times ED_{2-6} \times ADAF_{2-6}) \\ +(MAF_I \times ED_{6-16} \times ADAF_{6-16}) + (MAF_I \times ED_{16-26} \times ADAF_{16-26})\end{array}\right)\right]}$$

Vinyl Chloride:

$$(R)SL = \frac{TR}{IUR + \left(\frac{IUR \times EF_r \times ED_r \times ET_r \times \frac{1\ day}{24\ hour}}{AT_c \times 365\frac{days}{year}}\right)}$$

Noncancer Hazard:

$$(R)SL = \frac{THQ \times AT_{nc,c} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{\frac{1}{RfC} \times ED_c \times EF_r \times ET_r}$$

		USEPA Regional Screening Levels for Residential Air				DTSC Screening Levels for Residential Air			
		IUR	USEPA RSL:Cancer	RfC	USEPA RSL: Noncancer	IUR	DTSC-SL: Cancer	RfC	DTSC-SL: Noncancer
Analyte	**Mutagen?**	(µg/m^3)$^{-1}$	(µg/m^3)	(µg/m^3)	(µg/m^3)	(µg/m^3)$^{-1}$	(µg/m^3)	(µg/m^3)	(µg/m^3)
Terbufos		--	--	--	--	--	--	1.00E-01	1.04E-01
Tetrachlorobenzene, 1,2,4,5-		--	--	--	--	--	--	1.20E+00	1.25E+00
Tetrachloroethane, 1,1,1,2-		7.40E-06	3.79E-01	--	--	7.40E-06	3.79E-01	1.20E+02	1.25E+02
Tetrachloroethane, 1,1,2,2-		5.80E-05	4.84E-02	--	--	5.80E-05	4.84E-02	8.00E+01	8.34E+01
Tetrachloroethylene		2.60E-07	1.08E+01	4.00E+01	4.17E+01	5.90E-06	4.76E-01	3.50E+01	3.65E+01
Tetrachlorotoluene, p- alpha, alpha, alpha-		--	--	--	--	5.00E-03	5.62E-04	--	--
Thallium Acetate		--	--	--	--	--	--	2.40E-02	2.50E-02
Thallium Carbonate		--	--	--	--	--	--	8.00E-02	8.34E-02
Toluene		--	--	5.00E+03	5.21E+03	--	--	3.00E+02	3.13E+02
Toxaphene		3.20E-04	8.77E-03	--	--	3.40E-04	8.26E-03	--	--
Tri-n-butyltin		--	--	--	--	--	--	1.20E+00	1.25E+00
Triallate		--	--	--	--	--	--	5.20E+01	5.42E+01
Tribromobenzene, 1,2,4-		--	--	--	--	--	--	2.00E+01	2.09E+01
Trichlorobenzene, 1,2,3-		--	--	--	--	--	--	3.20E+00	3.34E+00
Trichlorobenzene, 1,2,4-		--	--	2.00E+00	2.09E+00	7.25E-06	3.87E-01	2.00E+00	2.09E+00
Trichloroethane, 1,1,1-		--	--	5.00E+03	5.21E+03	--	--	1.00E+03	1.04E+03
Trichlorofluoromethane		--	--	--	--	--	--	1.20E+03	1.25E+03
Trichlorophenol, 2,4,6-		3.10E-06	9.06E-01	--	--	2.00E-05	1.40E-01	--	--

Table C-2. USEPA RSLs and DTSC-SLs for Inhalation of Residential Air

Definition	Variable	USEPA Value	DTSC Value	
Age-dependent Adjustment Factor, 0-2	$ADAF_{0-2}$	10	10	dimensionless
Age-dependent Adjustment Factor, 2-6	$ADAF_{2-6}$	3	3	dimensionless
Age-dependent Adjustment Factor, 6-16	$ADAF_{6-16}$	3	3	dimensionless
Age-dependent Adjustment Factor, 16-30	$ADAF_{16-30}$	1	1	dimensionless
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, child	$AT_{nc,c}$	6	6	yrs
COPC Concentration in indoor air	$C_{indoor\ air}$	chemical-specific		µg/m^3
Carcinogenic adjustment factor, inhalation	CAF_I	0.756	0.756	dimensionless
Exposure Duration, child 0-2	ED_{0-2}	2	2	yrs
Exposure Duration, child 2-6	ED_{2-6}	4	4	yrs
Exposure Duration, child 6-16	ED_{6-16}	10	10	yrs
Exposure Duration, adult 16-30	ED_{16-30}	10	10	yrs
Exposure Duration, child	ED_c	6	6	yrs
Exposure Duration, resident	ED_r	26	26	yrs
Exposure Frequency, resident	EF_r	350	350	days/yr
Exposure Time, resident	ET_r	24	24	hours/day
Inhalation Unit-Risk Factor	IUR	chemical-specific		(µg/m^3)$^{-1}$
Mutagenic adjustment factor, inhalation	MAF_I	0.244	0.244	dimensionless
Inhalation Reference Concentration	RfC	chemical-specific		µg/m^3
(Regional) Screening Level	(R)SL	derived herein		
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	

RSL Derivation:

Carcinogens:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times ED_r \times EF_r \times ET_r}$$

Mutagens:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{EF_r \times ET_r \times \left[\begin{array}{c}(ED_{0-2} \times IUR \times ADAF_{0-2}) + (ED_{2-6} \times IUR \times ADAF_{2-6}) \\ +(ED_{6-16} \times IUR \times ADAF_{6-16}) + (ED_{16-26} \times IUR \times ADAF_{16-26})\end{array}\right]}$$

Trichloroethene:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times EF_r \times ET_r \times \left[(CAF_I \times ED_r) + \left(\begin{array}{c}(MAF_I \times ED_{0-2} \times ADAF_{0-2}) + (MAF_I \times ED_{2-6} \times ADAF_{2-6}) \\ +(MAF_I \times ED_{6-16} \times ADAF_{6-16}) + (MAF_I \times ED_{16-26} \times ADAF_{16-26})\end{array}\right)\right]}$$

Vinyl Chloride:

$$(R)SL = \frac{TR}{IUR + \left(\frac{IUR \times EF_r \times ED_r \times ET_r \times \frac{1\ day}{24\ hour}}{AT_c \times 365\frac{days}{year}}\right)}$$

Noncancer Hazard:

$$(R)SL = \frac{THQ \times AT_{nc,c} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{\frac{1}{RfC} \times ED_c \times EF_r \times ET_r}$$

		USEPA Regional Screening Levels for Residential Air				DTSC Screening Levels for Residential Air			
Analyte	**Mutagen?**	**IUR** (µg/m^3)$^{-1}$	**USEPA RSL:Cancer** (µg/m^3)	**RfC** (µg/m^3)	**USEPA RSL: Noncancer** (µg/m^3)	**IUR** (µg/m^3)$^{-1}$	**DTSC-SL: Cancer** (µg/m^3)	**RfC** (µg/m^3)	**DTSC-SL: Noncancer** (µg/m^3)
Trichloropropane, 1,1,2-		--	--	--	--	--	--	2.00E+01	2.09E+01
Trichloropropane, 1,2,3-	M	--	--	3.00E-01	3.13E-01	7.50E-03	1.35E-04	3.00E-01	3.13E-01
Trifluralin		--	--	--	--	1.93E-06	1.46E+00	3.00E+01	3.13E+01
Trimethylbenzene, 1,3,5-		--	--	--	--	--	--	4.00E+01	4.17E+01
Trimethylpentene, 2,4,4-		--	--	--	--	--	--	4.00E+01	4.17E+01
Vernolate		--	--	--	--	--	--	4.00E+00	4.17E+00
Vinyl Chloride	M (VC)	4.40E-06	1.68E-01	1.00E+02	1.04E+02	7.80E-05	9.45E-03	1.00E+02	1.04E+02
Additional Analytes									
Beryllium Sulfate		2.40E-03	1.17E-03	2.00E-02	2.09E-02	8.60E-01	3.26E-06	7.00E-03	7.30E-03
Dichlorobenzene, 1,3-		--	--	--	--	--	--	1.20E+02	1.25E+02
Methylcyclohexane		--	--	--	--	--	--	6.00E+03	6.26E+03

"--" = no value

Table C-3. USEPA RSLs and DTSC-SLs for Inhalation of Commercial/Industrial Air

Definition	Variable	USEPA Value	DTSC Value		Risk and Hazard Equations
Averaging Time, carcinogens	AT_c	70	70	yrs	Cancer Risk:
Averaging Time, noncarcinogens, worker	$AT_{nc,w}$	25	25	yrs	
COPC Concentration in indoor air	$C_{indoor\ air}$	chemical-specific		µg/m^3	$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times ED_w \times EF_w \times ET_w}$
Exposure Duration, worker	ED_w	25	25	yrs	
Exposure Frequency, worker	EF_w	250	250	days/yr	
Exposure Time, worker	ET_w	8	8	hours/day	
Inhalation Unit-Risk Factor	IUR	chemical-specific		(µg/m^3)$^{-1}$	
Inhalation Reference Concentration	RfC	chemical-specific		µg/m^3	Noncancer Hazard:
(Regional) Screening Level	(R)SL	derived herein		µg/m^3	$(R)SL = \frac{THQ \times AT_{nc,w} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{\frac{1}{RfC} \times ED_w \times EF_w \times ET_w}$
Target Hazard Quotient	THQ	1	1	dimensionless	
Target Risk	TR	1.0E-06	1.0E-06	dimensionless	

	USEPA Regional Screening Level for Commercial/Industrial Air				DTSC Screening Level for Commercial/Industrial Air			
Analyte	**IUR** (µg/m3)-1	**USEPA RSL: Cancer** (µg/m3)	**RfC** (µg/m3)	**USEPA RSL: Noncancer** (µg/m3)	**IUR** (µg/m3)-1	**DTSC-SL: Cancer** (µg/m3)	**RfC** (µg/m3)	**DTSC-SL: Noncancer** (µg/m3)
USEPA RSL Analytes								
Acetaldehyde	2.20E-06	5.57E+00	9.00E+00	3.94E+01	2.70E-06	4.54E+00	9.00E+00	3.94E+01
Acetophenone	--	--	--	--	--	--	4.00E+02	1.75E+03
Acrylamide	1.00E-04	1.23E-01	6.00E+00	2.63E+01	1.30E-03	9.43E-03	6.00E+00	2.63E+01
Acrylonitrile	6.80E-05	1.80E-01	2.00E+00	8.76E+00	2.90E-04	4.23E-02	2.00E+00	8.76E+00
Aldrin	4.90E-03	2.50E-03	--	--	4.90E-03	2.50E-03	1.20E-01	5.26E-01
Arsine	--	--	5.00E-02	2.19E-01	--	--	1.50E-02	6.57E-02
Benfluralin	--	--	--	--	--	--	1.20E+03	5.26E+03
Benzaldehyde	--	--	--	--	--	--	4.00E+02	1.75E+03
Benzene	7.80E-06	1.57E+00	3.00E+01	1.31E+02	2.90E-05	4.23E-01	3.00E+00	1.31E+01
Benzenethiol	--	--	--	--	--	--	4.00E+00	1.75E+01
Benzidine	6.70E-02	1.83E-04	--	--	1.40E-01	8.76E-05	--	--
Benzotrichloride	--	--	--	--	3.25E-03	3.77E-03	--	--
Beryllium and compounds	2.40E-03	5.11E-03	2.00E-02	8.76E-02	2.40E-03	5.11E-03	7.00E-03	3.07E-02
Biphenyl, 1,1'-	--	--	4.00E-01	1.75E+00	2.00E-06	6.13E+00	4.00E-01	1.75E+00
Bis(2-chloro-1-methylethyl) ether	--	--	--	--	--	--	1.60E+02	7.01E+02
Bis(2-chloroethyl)ether	3.30E-04	3.72E-02	--	--	7.10E-04	1.73E-02	--	--
Boron Trifluoride	--	--	1.30E+01	5.69E+01	--	--	7.00E-01	3.07E+00
Bromodichloromethane	3.70E-05	3.31E-01	--	--	3.70E-05	3.31E-01	8.00E+01	3.50E+02
Bromoform	1.10E-06	1.11E+01	--	--	1.10E-06	1.11E+01	8.00E+01	3.50E+02
Bromophos	--	--	--	--	--	--	2.00E+01	8.76E+01
Bromoxynil Octanoate	--	--	--	--	--	--	8.00E+01	3.50E+02
Butadiene, 1,3-	3.00E-05	4.09E-01	2.00E+00	8.76E+00	1.70E-04	7.21E-02	2.00E+00	8.76E+00
Butanol, N-	--	--	--	--	--	--	4.00E+02	1.75E+03
Butylate	--	--	--	--	--	--	2.00E+02	8.76E+02
Butylbenzene, n-	--	--	--	--	--	--	2.00E+02	8.76E+02
Butylbenzene, sec-	--	--	--	--	--	--	4.00E+02	1.75E+03
Butylbenzene, tert-	--	--	--	--	--	--	4.00E+02	1.75E+03

Table C-3. USEPA RSLs and DTSC-SLs for Inhalation of Commercial/Industrial Air

Definition	Variable	USEPA Value	DTSC Value		Risk and Hazard Equations
Averaging Time, carcinogens	AT_c	70	70	yrs	Cancer Risk:
Averaging Time, noncarcinogens, worker	$AT_{nc,w}$	25	25	yrs	
COPC Concentration in indoor air	$C_{indoor\ air}$	chemical-specific		µg/m^3	$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times ED_w \times EF_w \times ET_w}$
Exposure Duration, worker	ED_w	25	25	yrs	
Exposure Frequency, worker	EF_w	250	250	days/yr	
Exposure Time, worker	ET_w	8	8	hours/day	
Inhalation Unit-Risk Factor	IUR	chemical-specific		(µg/m^3)$^{-1}$	
Inhalation Reference Concentration	RfC	chemical-specific		µg/m^3	Noncancer Hazard:
(Regional) Screening Level	(R)SL	derived herein		µg/m^3	$(R)SL = \frac{THQ \times AT_{nc,w} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{\frac{1}{RfC} \times ED_w \times EF_w \times ET_w}$
Target Hazard Quotient	THQ	1	1	dimensionless	
Target Risk	TR	1.0E-06	1.0E-06	dimensionless	

	USEPA Regional Screening Level for Commercial/Industrial Air				DTSC Screening Level for Commercial/Industrial Air			
	IUR	**USEPA RSL: Cancer**	**RfC**	**USEPA RSL: Noncancer**	**IUR**	**DTSC-SL: Cancer**	**RfC**	**DTSC-SL: Noncancer**
Analyte	(µg/m3)-1	(µg/m3)	(µg/m3)	(µg/m3)	(µg/m3)-1	(µg/m3)	(µg/m3)	(µg/m3)
Cadmium (Water)	1.80E-03	6.81E-03	1.00E-02	4.38E-02	4.20E-03	2.92E-03	1.00E-02	4.38E-02
Carbon Tetrachloride	6.00E-06	2.04E+00	1.00E+02	4.38E+02	4.20E-05	2.92E-01	4.00E+01	1.75E+02
Chloral Hydrate	--	--	--	--	--	--	4.00E+02	1.75E+03
Chlordane	1.00E-04	1.23E-01	7.00E-01	3.07E+00	3.40E-04	3.61E-02	7.00E-01	3.07E+00
Chloroacetaldehyde, 2-	--	--	--	--	6.75E-05	1.82E-01	--	--
Chlorobenzilate	3.10E-05	3.96E-01	--	--	7.80E-05	1.57E-01	--	--
Chlorobutane, 1-	--	--	--	--	--	--	1.60E+02	7.01E+02
Chloroethanol, 2-	--	--	--	--	--	--	8.00E+01	3.50E+02
Chlorophenol, 2-	--	--	--	--	--	--	2.00E+01	8.76E+01
Chlorotoluene, o-	--	--	--	--	--	--	8.00E+01	3.50E+02
Chlorotoluene, p-	--	--	--	--	--	--	8.00E+01	3.50E+02
Crotonaldehyde, trans-	--	--	--	--	4.75E-04	2.58E-02	4.00E+00	1.75E+01
Cyanides								
~Cyanogen	--	--	--	--	--	--	4.00E+00	1.75E+01
~Cyanogen Bromide	--	--	--	--	--	--	3.60E+02	1.58E+03
~Cyanogen Chloride	--	--	--	--	--	--	2.00E+02	8.76E+02
~Thiocyanic Acid	--	--	--	--	--	--	8.00E-01	3.50E+00
Cyclohexylamine	--	--	--	--	--	--	8.00E+02	3.50E+03
Dibenzothiophene	--	--	--	--	--	--	4.00E+01	1.75E+02
Dibromobenzene, 1,3-	--	--	--	--	--	--	1.60E+00	7.01E+00
Dibromobenzene, 1,4-	--	--	--	--	--	--	4.00E+01	1.75E+02
Dibromochloromethane	--	--	--	--	2.10E-05	5.84E-01	8.00E+01	3.50E+02
Dibromoethane, 1,2-	6.00E-04	2.04E-02	9.00E+00	3.94E+01	6.00E-04	2.04E-02	8.00E-01	3.50E+00
Dichloroethane, 1,1-	1.60E-06	7.67E+00	--	--	1.60E-06	7.67E+00	8.00E+02	3.50E+03
Dichloroethylene, 1,1-	--	--	2.00E+02	8.76E+02	--	--	7.00E+01	3.07E+02
Dichloroethylene, 1,2-cis-	--	--	--	--	--	--	8.00E+00	3.50E+01
Dichloroethylene, 1,2-trans-	--	--	--	--	--	--	8.00E+01	3.50E+02

Table C-3. USEPA RSLs and DTSC-SLs for Inhalation of Commercial/Industrial Air

Definition	Variable	USEPA Value	DTSC Value		Risk and Hazard Equations
Averaging Time, carcinogens	AT_c	70	70	yrs	Cancer Risk:
Averaging Time, noncarcinogens, worker	$AT_{nc,w}$	25	25	yrs	
COPC Concentration in indoor air	$C_{indoor\ air}$	chemical-specific		µg/m^3	$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times ED_w \times EF_w \times ET_w}$
Exposure Duration, worker	ED_w	25	25	yrs	
Exposure Frequency, worker	EF_w	250	250	days/yr	
Exposure Time, worker	ET_w	8	8	hours/day	
Inhalation Unit-Risk Factor	IUR	chemical-specific		(µg/m^3)$^{-1}$	
Inhalation Reference Concentration	RfC	chemical-specific		µg/m^3	Noncancer Hazard:
(Regional) Screening Level	(R)SL	derived herein		µg/m^3	$(R)SL = \frac{THQ \times AT_{nc,w} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{\frac{1}{RfC} \times ED_w \times EF_w \times ET_w}$
Target Hazard Quotient	THQ	1	1	dimensionless	
Target Risk	TR	1.0E-06	1.0E-06	dimensionless	

	USEPA Regional Screening Level for Commercial/Industrial Air				DTSC Screening Level for Commercial/Industrial Air			
Analyte	**IUR** (µg/m3)-1	**USEPA RSL: Cancer** (µg/m3)	**RfC** (µg/m3)	**USEPA RSL: Noncancer** (µg/m3)	**IUR** (µg/m3)-1	**DTSC-SL: Cancer** (µg/m3)	**RfC** (µg/m3)	**DTSC-SL: Noncancer** (µg/m3)
Dichloropropane, 1,3-	--	--	--	--	--	--	8.00E+01	3.50E+02
Dichloropropene, 1,3-	4.00E-06	3.07E+00	2.00E+01	8.76E+01	1.60E-05	7.67E-01	2.00E+01	8.76E+01
Dieldrin	4.60E-03	2.67E-03	--	--	4.60E-03	2.67E-03	2.00E-01	8.76E-01
Diethylformamide	--	--	--	--	--	--	4.00E+00	1.75E+01
Diisopropyl Methylphosphonate	--	--	--	--	--	--	3.20E+02	1.40E+03
Dimethylaniline, N,N-	--	--	--	--	--	--	8.00E+00	3.50E+01
Dioxane, 1,4-	5.00E-06	2.45E+00	3.00E+01	1.31E+02	7.70E-06	1.59E+00	3.00E+01	1.31E+02
Dioxins								
~Hexachlorodibenzo-p-dioxin, Mixture	1.30E+00	9.43E-06	--	--	3.80E+00	3.23E-06	--	--
Diphenylhydrazine, 1,2-	2.20E-04	5.57E-02	--	--	2.50E-04	4.91E-02	--	--
Dithiane, 1,4-	--	--	--	--	--	--	4.00E+01	1.75E+02
EPTC	--	--	--	--	--	--	1.00E+02	4.38E+02
Endosulfan	--	--	--	--	--	--	2.40E+01	1.05E+02
Epichlorohydrin	1.20E-06	1.02E+01	1.00E+00	4.38E+00	2.30E-05	5.33E-01	1.00E+00	4.38E+00
Ethoxyethanol, 2-	--	--	2.00E+02	8.76E+02	--	--	7.00E+01	3.07E+02
Ethyl Chloride (Chloroethane)	--	--	1.00E+04	4.38E+04	1.18E-06	1.04E+01	1.00E+04	4.38E+04
Ethyl Ether	--	--	--	--	--	--	8.00E+02	3.50E+03
Ethylene Diamine	--	--	--	--	--	--	3.60E+02	1.58E+03
Formaldehyde	1.30E-05	9.43E-01	9.80E+00	4.29E+01	1.30E-05	9.43E-01	9.00E+00	3.94E+01
Furans								
~Dibenzofuran	--	--	--	--	--	--	4.00E+00	1.75E+01
~Furan	--	--	--	--	--	--	4.00E+00	1.75E+01
Guanidine	--	--	--	--	--	--	4.00E+01	1.75E+02
Heptachlor	1.30E-03	9.43E-03	--	--	1.30E-03	9.43E-03	2.00E+00	8.76E+00
Heptachlor Epoxide	2.60E-03	4.72E-03	--	--	2.60E-03	4.72E-03	5.20E-02	2.28E-01
Hexabromobenzene	--	--	--	--	--	--	8.00E+00	3.50E+01
Hexachlorobenzene	4.60E-04	2.67E-02	--	--	5.10E-04	2.40E-02	3.20E+00	1.40E+01
Hexachlorobutadiene	2.20E-05	5.57E-01	--	--	2.20E-05	5.57E-01	4.00E+00	1.75E+01

Table C-3. USEPA RSLs and DTSC-SLs for Inhalation of Commercial/Industrial Air

Definition	Variable	USEPA Value	DTSC Value	
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, worker	$AT_{nc,w}$	25	25	yrs
COPC Concentration in indoor air	$C_{indoor\ air}$	chemical-specific		µg/m^3
Exposure Duration, worker	ED_w	25	25	yrs
Exposure Frequency, worker	EF_w	250	250	days/yr
Exposure Time, worker	ET_w	8	8	hours/day
Inhalation Unit-Risk Factor	IUR	chemical-specific		(µg/m^3)$^{-1}$
Inhalation Reference Concentration	RfC	chemical-specific		µg/m^3
(Regional) Screening Level	(R)SL	derived herein		µg/m^3
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless

Risk and Hazard Equations

Cancer Risk:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times ED_w \times EF_w \times ET_w}$$

Noncancer Hazard:

$$(R)SL = \frac{THQ \times AT_{nc,w} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{\frac{1}{RfC} \times ED_w \times EF_w \times ET_w}$$

	USEPA Regional Screening Level for Commercial/Industrial Air				DTSC Screening Level for Commercial/Industrial Air			
Analyte	**IUR** (µg/m3)-1	**USEPA RSL: Cancer** (µg/m3)	**RfC** (µg/m3)	**USEPA RSL: Noncancer** (µg/m3)	**IUR** (µg/m3)-1	**DTSC-SL: Cancer** (µg/m3)	**RfC** (µg/m3)	**DTSC-SL: Noncancer** (µg/m3)
Hexachlorocyclohexane, Alpha-	1.80E-03	6.81E-03	--	--	1.80E-03	6.81E-03	3.20E+01	1.40E+02
Hexachlorocyclohexane, Gamma- (Lindane)	3.10E-04	3.96E-02	--	--	3.10E-04	3.96E-02	1.20E+00	5.26E+00
Hexachlorocyclohexane, Technical	5.10E-04	2.40E-02	--	--	1.10E-03	1.11E-02	--	--
Hydrogen Chloride	--	--	2.00E+01	8.76E+01	--	--	9.00E+00	3.94E+01
Isobutyl Alcohol	--	--	--	--	--	--	1.20E+03	5.26E+03
Isopropalin	--	--	--	--	--	--	6.00E+01	2.63E+02
Lead Compounds								
~Tetraethyl Lead	--	--	--	--	--	--	4.00E-04	1.75E-03
Lewisite	--	--	--	--	--	--	2.00E-02	8.76E-02
Mercury Compounds								
~Mercuric Chloride (and other Mercury salts)	--	--	3.00E-01	1.31E+00	--	--	3.00E-02	1.31E-01
~Mercury (elemental)	--	--	3.00E-01	1.31E+00	--	--	3.00E-02	1.31E-01
Merphos	--	--	--	--	--	--	1.20E-01	5.26E-01
Methanol	--	--	2.00E+04	8.76E+04	--	--	4.00E+03	1.75E+04
Methoxychlor	--	--	--	--	--	--	2.00E+01	8.76E+01
Methyl Acetate	--	--	--	--	--	--	4.00E+03	1.75E+04
Methylene Chloride	1.00E-08	1.23E+03	6.00E+02	2.63E+03	1.00E-06	1.23E+01	4.00E+02	1.75E+03
Methylstyrene, Alpha-	--	--	--	--	--	--	2.80E+02	1.23E+03
Mineral oils	--	--	--	--	--	--	1.20E+04	5.26E+04
Mirex	5.10E-03	2.40E-03	--	--	5.10E-03	2.40E-03	8.00E-01	3.50E+00
Naled	--	--	--	--	--	--	8.00E+00	3.50E+01
Naphthylamine, 2-	--	--	--	--	5.10E-04	2.40E-02	--	--
Nickel Refinery Dust	2.40E-04	5.11E-02	1.40E-02	6.13E-02	2.60E-04	4.72E-02	1.40E-02	6.13E-02
Nickel Soluble Salts	2.60E-04	4.72E-02	9.00E-02	3.94E-01	2.60E-04	4.72E-02	1.40E-02	6.13E-02
Nickel Subsulfide	4.80E-04	2.56E-02	1.40E-02	6.13E-02	4.90E-04	2.50E-02	1.40E-02	6.13E-02
Nitroso-di-N-butylamine, N-	1.60E-03	7.67E-03	--	--	3.10E-03	3.96E-03	--	--
Nitrotoluene, o-	--	--	--	--	5.50E-05	2.23E-01	3.60E+00	1.58E+01
Pebulate	--	--	--	--	--	--	2.00E+02	8.76E+02

Table C-3. USEPA RSLs and DTSC-SLs for Inhalation of Commercial/Industrial Air

Definition	Variable	USEPA Value	DTSC Value	
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, worker	$AT_{nc,w}$	25	25	yrs
COPC Concentration in indoor air	$C_{indoor\ air}$	chemical-specific		µg/m^3
Exposure Duration, worker	ED_w	25	25	yrs
Exposure Frequency, worker	EF_w	250	250	days/yr
Exposure Time, worker	ET_w	8	8	hours/day
Inhalation Unit-Risk Factor	IUR	chemical-specific		(µg/m^3)$^{-1}$
Inhalation Reference Concentration	RfC	chemical-specific		µg/m^3
(Regional) Screening Level	(R)SL	derived herein		µg/m^3
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless

Risk and Hazard Equations

Cancer Risk:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times ED_w \times EF_w \times ET_w}$$

Noncancer Hazard:

$$(R)SL = \frac{THQ \times AT_{nc,w} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{\frac{1}{RfC} \times ED_w \times EF_w \times ET_w}$$

	USEPA Regional Screening Level for Commercial/Industrial Air				DTSC Screening Level for Commercial/Industrial Air			
Analyte	**IUR** (µg/m3)-1	**USEPA RSL: Cancer** (µg/m3)	**RfC** (µg/m3)	**USEPA RSL: Noncancer** (µg/m3)	**IUR** (µg/m3)-1	**DTSC-SL: Cancer** (µg/m3)	**RfC** (µg/m3)	**DTSC-SL: Noncancer** (µg/m3)
Pentabromodiphenyl Ether	--	--	--	--	--	--	8.00E+00	3.50E+01
Pentachlorobenzene	--	--	--	--	--	--	3.20E+00	1.40E+01
Pentachloroethane	--	--	--	--	2.25E-05	5.45E-01	--	--
Pentachloronitrobenzene	--	--	--	--	6.50E-05	1.89E-01	1.20E+01	5.26E+01
Perfluorobutane Sulfonate	--	--	--	--	--	--	8.00E+01	3.50E+02
Phosphoric Acid	--	--	1.00E+01	4.38E+01	--	--	7.00E+00	3.07E+01
Phosphorus, White	--	--	--	--	--	--	8.00E-02	3.50E-01
Phthalates								
~Dimethylterephthalate	--	--	--	--	--	--	4.00E+02	1.75E+03
Polychlorinated Biphenyls (PCBs)								
~Aroclor 1016	2.00E-05	6.13E-01	--	--	2.00E-05	6.13E-01	2.80E-01	1.23E+00
~Aroclor 1254	5.71E-04	2.15E-02	--	--	5.71E-04	2.15E-02	8.00E-02	3.50E-01
~Aroclor 5460	--	--	--	--	--	--	2.40E+00	1.05E+01
Polynuclear Aromatic Hydrocarbons (PAHs)								
~Acenaphthene	--	--	--	--	--	--	2.40E+02	1.05E+03
~Anthracene	--	--	--	--	--	--	1.20E+03	5.26E+03
~Chloronaphthalene, Beta-	--	--	--	--	--	--	3.20E+02	1.40E+03
~Fluorene	--	--	--	--	--	--	1.60E+02	7.01E+02
~Methylnaphthalene, 1-	--	--	--	--	7.25E-06	1.69E+00	2.80E+02	1.23E+03
~Methylnaphthalene, 2-	--	--	--	--	--	--	1.60E+01	7.01E+01
~Pyrene	--	--	--	--	--	--	1.20E+02	5.26E+02
Profluralin	--	--	--	--	--	--	2.40E+01	1.05E+02
Propargyl Alcohol	--	--	--	--	--	--	8.00E+00	3.50E+01
Pyridine	--	--	--	--	--	--	4.00E+00	1.75E+01
Ronnel	--	--	--	--	--	--	2.00E+02	8.76E+02
Styrene	--	--	1.00E+03	4.38E+03	--	--	9.00E+02	3.94E+03
Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl es	7.10E-06	1.73E+00	--	--	8.60E-06	1.43E+00	--	--
Terbufos	--	--	--	--	--	--	1.00E-01	4.38E-01

Table C-3. USEPA RSLs and DTSC-SLs for Inhalation of Commercial/Industrial Air

Definition	Variable	USEPA Value	DTSC Value	
Averaging Time, carcinogens	AT_c	70	70	yrs
Averaging Time, noncarcinogens, worker	$AT_{nc,w}$	25	25	yrs
COPC Concentration in indoor air	$C_{indoor\ air}$	chemical-specific		µg/m^3
Exposure Duration, worker	ED_w	25	25	yrs
Exposure Frequency, worker	EF_w	250	250	days/yr
Exposure Time, worker	ET_w	8	8	hours/day
Inhalation Unit-Risk Factor	IUR	chemical-specific		(µg/m^3)$^{-1}$
Inhalation Reference Concentration	RfC	chemical-specific		µg/m^3
(Regional) Screening Level	(R)SL	derived herein		µg/m^3
Target Hazard Quotient	THQ	1	1	dimensionless
Target Risk	TR	1.0E-06	1.0E-06	dimensionless

Risk and Hazard Equations

Cancer Risk:

$$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times ED_w \times EF_w \times ET_w}$$

Noncancer Hazard:

$$(R)SL = \frac{THQ \times AT_{nc,w} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{\frac{1}{RfC} \times ED_w \times EF_w \times ET_w}$$

	USEPA Regional Screening Level for Commercial/Industrial Air				DTSC Screening Level for Commercial/Industrial Air			
Analyte	**IUR** (µg/m3)-1	**USEPA RSL: Cancer** (µg/m3)	**RfC** (µg/m3)	**USEPA RSL: Noncancer** (µg/m3)	**IUR** (µg/m3)-1	**DTSC-SL: Cancer** (µg/m3)	**RfC** (µg/m3)	**DTSC-SL: Noncancer** (µg/m3)
Tetrachlorobenzene, 1,2,4,5-	--	--	--	--	--	--	1.20E+00	5.26E+00
Tetrachloroethane, 1,1,1,2-	7.40E-06	1.66E+00	--	--	7.40E-06	1.66E+00	1.20E+02	5.26E+02
Tetrachloroethane, 1,1,2,2-	5.80E-05	2.11E-01	--	--	5.80E-05	2.11E-01	8.00E+01	3.50E+02
Tetrachloroethylene	2.60E-07	4.72E+01	4.00E+01	1.75E+02	5.90E-06	2.08E+00	3.50E+01	1.53E+02
Tetrachlorotoluene, p- alpha, alpha, alpha-	--	--	--	--	5.00E-03	2.45E-03	--	--
Thallium Acetate	--	--	--	--	--	--	2.40E-02	1.05E-01
Thallium Carbonate	--	--	--	--	--	--	8.00E-02	3.50E-01
Toluene	--	--	5.00E+03	2.19E+04	--	--	3.00E+02	1.31E+03
Toxaphene	3.20E-04	3.83E-02	--	--	3.40E-04	3.61E-02	--	--
Tri-n-butyltin	--	--	--	--	--	--	1.20E+00	5.26E+00
Triallate	--	--	--	--	--	--	5.20E+01	2.28E+02
Tribromobenzene, 1,2,4-	--	--	--	--	--	--	2.00E+01	8.76E+01
Trichlorobenzene, 1,2,3-	--	--	--	--	--	--	3.20E+00	1.40E+01
Trichlorobenzene, 1,2,4-	--	--	2.00E+00	8.76E+00	7.25E-06	1.69E+00	2.00E+00	8.76E+00
Trichloroethane, 1,1,1-	--	--	5.00E+03	2.19E+04	--	--	1.00E+03	4.38E+03
Trichlorofluoromethane	--	--	--	--	--	--	1.20E+03	5.26E+03
Trichlorophenol, 2,4,6-	3.10E-06	3.96E+00	--	--	2.00E-05	6.13E-01	--	--
Trichloropropane, 1,1,2-	--	--	--	--	--	--	2.00E+01	8.76E+01
Trichloropropane, 1,2,3-	--	--	3.00E-01	1.31E+00	7.50E-03	1.64E-03	3.00E-01	1.31E+00
Trifluralin	--	--	--	--	1.93E-06	6.37E+00	3.00E+01	1.31E+02
Trimethylbenzene, 1,3,5-	--	--	--	--	--	--	4.00E+01	1.75E+02
Trimethylpentene, 2,4,4-	--	--	--	--	--	--	4.00E+01	1.75E+02
Vernolate	--	--	--	--	--	--	4.00E+00	1.75E+01
Vinyl Chloride	4.40E-06	2.79E+00	1.00E+02	4.38E+02	7.80E-05	1.57E-01	1.00E+02	4.38E+02

Table C-3. USEPA RSLs and DTSC-SLs for Inhalation of Commercial/Industrial Air

Definition	Variable	USEPA Value	DTSC Value		Risk and Hazard Equations
Averaging Time, carcinogens	AT_c	70	70	yrs	Cancer Risk:
Averaging Time, noncarcinogens, worker	$AT_{nc,w}$	25	25	yrs	
COPC Concentration in indoor air	$C_{indoor\ air}$	chemical-specific		µg/m^3	$(R)SL = \frac{TR \times AT_c \times 365\frac{day}{year} \times 24\frac{hour}{day}}{IUR \times ED_w \times EF_w \times ET_w}$
Exposure Duration, worker	ED_w	25	25	yrs	
Exposure Frequency, worker	EF_w	250	250	days/yr	
Exposure Time, worker	ET_w	8	8	hours/day	
Inhalation Unit-Risk Factor	IUR	chemical-specific		(µg/m^3)$^{-1}$	
Inhalation Reference Concentration	RfC	chemical-specific		µg/m^3	Noncancer Hazard:
(Regional) Screening Level	(R)SL	derived herein		µg/m^3	$(R)SL = \frac{THQ \times AT_{nc,w} \times 365\frac{day}{year} \times 24\frac{hour}{day}}{\frac{1}{RfC} \times ED_w \times EF_w \times ET_w}$
Target Hazard Quotient	THQ	1	1	dimensionless	
Target Risk	TR	1.0E-06	1.0E-06	dimensionless	

	USEPA Regional Screening Level for Commercial/Industrial Air				DTSC Screening Level for Commercial/Industrial Air			
	IUR	**USEPA RSL: Cancer**	**RfC**	**USEPA RSL: Noncancer**	**IUR**	**DTSC-SL: Cancer**	**RfC**	**DTSC-SL: Noncancer**
Analyte	(µg/m3)-1	(µg/m3)	(µg/m3)	(µg/m3)	(µg/m3)-1	(µg/m3)	(µg/m3)	(µg/m3)
Additional Analytes								
Beryllium Sulfate	2.40E-03	5.11E-03	2.00E-02	8.76E-02	8.60E-01	1.43E-05	7.00E-03	3.07E-02
Dichlorobenzene, 1,3-	--	--	--	--	--	--	1.20E+02	5.26E+02
Methylcyclohexane	--	--	--	--	--	--	6.00E+03	2.63E+04

"--" = no value